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ABSTRACT

This planning report summarizes the results of the Kansas Master Planning Commission analysis of the labor force requirements of Kansas to 1985. The study objectives were analyzed in terms of demography, geographic, and economic considerations. Accumulative and annual labor force requirements were analyzed in terms of region, occupational group, sex, year, and Educational and Training Preparation Groups (ETPG). A large amount of data generated by the manpower study indicated six major factors and corresponding conclusions pertinent to educational master planning. These factors include manpower demand, age composition, women in the labor force, labor force distribution, occupational distribution, and job preparation requirements. The appendix includes annual job openings classified by education and training, occupational group, and region of Kansas 1940-1985. (MJM)

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PROJECTION:

EDUCATIONAL AND TRAINING REQUIREMENTS

OF THE KANSAS ECONOMY TO 1985

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mpc MASTER PLANNING COMMISSION

Planning Report Number 2
August, 1971

MASTER PLANNING COMMISSION

The Master Planning Commission on Kansas education created by the 1970 Kansas Legislature, met for the first time in April, 1970, in Topeka. Its mission is to prepare the first phase of an educational master plan for Kansas. Such master plan is to outline the goals and objectives of education in Kansas and the first phase shall consist of two parts:

- Middle level public education – the area between the elementary-secondary school system and the four-year college and university, and
- Private education at two-year and four-year colleges and universities.

The Legislative charge to the Commission is presented in full at the end of this report.

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PREFACE

Manpower needs of the professions, business, and industry are in a constant state of change. Because of this, and because knowledge of the economy is an essential ingredient in educational planning, the Master Planning Commission undertook an intensive study to forecast and to analyze the labor force requirements of Kansas to 1985. The results of that study are summarized in this planning report.

The manpower study was planned and implemented by Dr. Harold L. Finch, MPC Research Associate, who also prepared this report.

There are various approaches to educational-manpower planning. The procedures employed in this study were selected on the basis of two fundamental criteria: (1) to fulfill the objectives of the Legislative charge to the Commission and (2) to make maximum use of existing knowledge and methodology where applicable and feasible.

In reading this study, several points should be kept in mind. The projections flow from statistical analysis based on present and past occupational patterns and to the extent that these trends continue the projections will be accurate. Second, manpower analysis is only one part of the overall study. Student interests and needs, for example, also are an essential part of the Commission's educational planning efforts. Finally, the study has a significant potential for aiding in the economic development of Kansas and it is hoped that it will serve as a catalyst in providing increased opportunities for the citizens of the State.

The manpower study generated a voluminous quantity of data. For example, the output included 48,000 distinct estimates of labor force and annual manpower needs. In order to reduce the data to a more manageable size, this report is limited to a summary of major findings. Questions concerning detailed data not reported herein should be directed to Dr. Finch.

Wilbur T. Billington, Chairman
Master Planning Commission

INTRODUCTION

In the past three decades the economy of Kansas has been affected by numerous major forces -- growth and recession, inflation, war, urbanization, industrialization, automation, increased standards of living, and changing consumer demands. During this period the economy changed markedly.

Correspondingly, job-entry requirements and the occupational composition of the Kansas work force also changed. The number of menial jobs declined whereas the complexity of most jobs increased significantly. Cryogenics, computers, and other developments found their way into the mainstream of the Kansas economy, and with them came new job markets and new types of jobs.

In recognition of the importance of changing manpower requirements and national priorities, economic and labor force specialists have increasingly expressed a need for comprehensive education and career-oriented training. Grant Venn,[1] former U.S. Associate Commissioner of Education, typified a general concern when he wrote:

> *Unless far more and better education on the semiprofessional, technical, and skilled levels is soon made available to greater numbers of citizens, the national economy and social structure will suffer irreparable damage.*

The economy is, of course, only one of the many factors that must be considered in long-range educational planning. Labor force needs must be weighed and balanced with such factors as the needs and aspirations of students, the total needs of society, available resources, governing legislation, and existing facilities.

The broad purpose of the Master Planning Commission's manpower study was to provide information about Kansas labor force requirements through the mid-1980's geared to those involved in the action - those making educational decisions and those doing educational planning. More specifically, the objectives were threefold:

- To provide insight into Kansas manpower and work trends over a period covering the past and present as well as the future.

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[1]Grant Venn. *Man, Education, and Manpower.* American Association of School Administrators. Washington, D.C., 1970, p. 23.

- To provide detailed projections of Kansas employment needs.
- To translate employment needs into educational and training requirements.

METHODOLOGY

The study objectives were analyzed in terms of demographic, geographic, and economic considerations as the first step in defining and developing the methodology to be employed in implementing the manpower study. From this, the following criteria were established:

Geographic stratification – analysis to be based on regions within Kansas as well as on the State as a whole.

Labor force stratification – results to be classified by sex and job category.

Educational and training stratification – results to provide direct interface between education, job training, and employment.

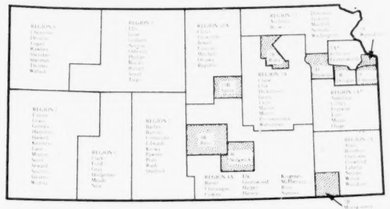
Time span – output to be developed for the past and present as well as the future.

Twenty regions were selected on the basis of geographic and labor market distribution. They were formed from the eleven regions defined by the Kansas Department of Economic Development but modified to include an additional nine single county regions having the most populated labor markets.[2] The nine single county regions collectively account for approximately fifty percent of the State's employed citizens. The twenty regions are illustrated in Figure 1.

[2]The regions defined by the Kansas Department of Economic Development were arbitrarily selected as a convenient means of collecting, analyzing, and presenting data and have no other significance to the study. The geographic breakdown of manpower data makes it possible to take into consideration the diverse nature of the Kansas economy and population.

FIGURE 1

TWENTY REGIONS EMPLOYED IN THE COLLECTION, ANALYSIS, AND PRESENTATION OF MANPOWER DATA



Regions based on geographic distribution

Regions based on civilian labor market density

*Region 1A consists of two geographically separated subregions.

Ten occupational groups based on the classification system employed by the U.S. Bureau of Census were defined:

1. Professional, technical, and kindred workers
2. Farmers and farm managers
3. Managers, officials, and proprietors (except farm)
4. Clerical and kindred workers
5. Sales workers
6. Craftsmen, foremen, and kindred workers
7. Operatives and kindred workers
8. Service workers (including private household)
9. Farm laborers and farm foremen
10. Laborers (except farm and mine)

In practice, educational and training requirements of most occupations are not precisely defined.[3] The exceptions include those that are regulated by professions or unions. Due to the unavailability of adequate job-entry qualification data reflecting actual hiring practices, a jury system was devised for the purpose of obtaining a consensus opinion from a group of representative practitioners involved in education, training, and employment. This resulted in the classification of over one hundred occupations relative to the following Educational and Training Preparation Groups (ETPG):

1. Four or more years of college
2. Either one to three years of college (technical and/or non-technical) or business school programs
3. High school attendance or graduation *plus* either apprenticeship training or trade technical certificate programs
4. High school attendance or graduation *plus* brief training
5. No training

In order to obtain insight into trends, patterns, and shifts in job preparation requirements throughout the State, a time frame of almost one-half century was selected. Analyses were conducted for the years 1940, 1950, 1960, 1970, 1975, and 1985.

[3]The absence of precisely defined job-entry information is due to several factors:

- Lack of standardization of job functions (variations occur from industry to industry, company to company, and sometimes within a company).
- Imbalance of supply and demand, resulting in some workers being undertrained and others being overtrained.
- Changes in job preparation requirements in response to societal and technological changes since World War II.

The *Occupational Outlook Handbook* published biannually by the U.S. Department of Labor provides educators and industry personnel with excellent information on job functions and training requirements; however, because of the above reasons, it is virtually impossible for this or any other reference to provide unequivocal definitions of educational and training requirements, especially for those occupations in the semiprofessional category.

An advisory committee assisted in the review of existing procedures and in the overall planning of methodology.[4] The review included procedures developed by four state planning groups (Indiana, Maryland, Minnesota, and Oklahoma), the U.S. Bureau of Labor Statistics, the Kansas Employment Security Division, and two Kansas educational agencies.[5] None of the methods satisfied the unique set of criteria established by the Master Planning Commission. Several of the procedures required census data not yet available in order to forecast to 1985, none classified output data by sex, none employed sub-state regions, and most provided no direct education-labor force interface.

The selected methodology centers around existent and projected detailed census data. Manpower forecasts were made by successive regression analyses of (1) Kansas male and female labor forces utilizing projected work force participation rates and U.S. Bureau of Census population projections and 1970 up-dated data, (2) regional male and female labor forces as percentages of State totals, and (3) percentage distribution of regional labor forces by occupational groups. These three matrices were used to generate labor force estimates by year, region, sex, and occupational group. The final step involved the computation of annual labor force needs, that is, annual job openings. This was done by analyzing the two components: annual expansion needs (vacancies due to population and economic changes), and annual replacement needs (vacancies due to death and retirement). Replacements were estimated from male and female actuarial data for the labor force as a whole.

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[4]Manpower Advisory Committee members

A. F. Buffo
Cowley County Community College

Dr. Bertram Caruthers
Kansas City, Kansas Public Schools

Dr. J. W. Drury
Kansas Legislative Council

Dr. Carl Heinrich
Kansas State Teachers College

Jack Lacy
Kansas Department of Economic Development

T. W. Lieurance
Southwestern Bell Telephone Company

Earnest Maxwell
Kansas Department of Labor

Charles Mooney
Regional Office, U.S. Department of Labor

Carl Norstrom
Kansas State Chamber of Commerce

John Snyder
Kansas Department of Education

[5]A review and analysis of existing procedures and of the related literature is presented in two previous reports which describe the manpower study.[6, 7]

Additional and more detailed information about the methodology and theory, may be obtained from two previous reports which describe the manpower study.[6, 7]

RESULTS

Accumulative and annual labor force requirements were analyzed in terms of region, occupational group, sex, year, and Educational and Training Preparation Groups (ETPG). Annual needs projected to 1985 are summarized graphically by occupational group in the Appendix and are supplemented by short-range forecasts of selected occupations in Tables 1 and 2.

In order to obtain a measure of validity, the projections for the State as a whole for 1975 were compared with manpower estimates developed jointly by the Kansas Employment Security Division (KESD) and the U.S. Bureau of Labor Statistics (BLS). The KESD/BLS study was based on a combination of econometric modeling and regression techniques. The results presented in Table 3 indicate that the two independent forecasts are in basic agreement.

The manpower study was undertaken to provide legislators and other long-range planners with insights into the future economic requirements of the State. In those cases where supply and demand imbalances are forecast, the study's most important use will be the provision of a basis for informed decisions. These decisions will be directed toward minimizing projected imbalances. Thus, the results of the study should not be interpreted in terms of absolute projections, but rather in terms of what will prevail if present manpower patterns and trends continue.

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[6]Harold L. Finch. "Educational and Training Requirements to Meet Projected Labor Force Needs of the State of Kansas to 1985," *Educational Planning to 1985*. Interim report, Master Planning Commission, Topeka, Kansas, December, 1970.

[7]Harold L. Finch. "Educational and Training Requirements to Meet Projected Labor Force Needs of the State of Kansas to 1985." Unpublished doctoral dissertation, University of Kansas, 1971.

TABLE 1

OCCUPATIONS EXPECTED TO HAVE LARGEST LABOR FORCES IN KANSAS IN 1975*

Occupation	Employment
Farmer, farm worker	64,900
Stenographer, typist, secretary	37,400
Elementary/secondary teacher	33,900
Laborer, except farm and mine	31,400
Manager, wholesale and retail	29,000
Driver; bus, truck, tractor	24,000
Private household worker	19,600
Waiter, waitress	16,000
Foreman, crafts	15,700
Hospital attendant	15,000
Engineer, technical	14,800
Cook, except private household	13,900
Janitor, sexton	13,800
Registered nurse	11,900
Cashier	11,500
Bookkeeper, hand	10,600
Carpenter	9,600
Auto mechanic	9,500
Teacher; dance, music	8,900

*Data based on estimates by the Kansas Employment Security Divison, but adjusted downward to coincide with updated population and labor force estimates of the U.S. Bureau of Census and the Kansas Master Planning Commission.

TABLE 2

SELECTED OCCUPATIONS EXPECTED TO HAVE RAPID OR MINIMAL LABOR FORCE GROWTH IN KANSAS DURING 1969–1975*

Rapid Growth Occupations	Minimal Growth or Declining Occupations
Business machine repairman	Carpenter
Computer operator	Compositor, typesetter
Computer programmer	Elementary teacher
Dental hygienist	Farmer, farm worker
Hospital attendant	Gasoline station attendant
Licensed practical nurse	Geologist
Medical technologist, technician	Insurance agent, broker
Photo engraver	Jeweler
Psychologist	Laborer
Radiologic technologist	Mining engineer
Social worker	Painter, paperhanger
Systems analyst	Railroad worker

*Synthesis of findings developed by the Kansas Employment Security Division, the U.S. Department of Labor, and the Kansas Master Planning Commission.

CONCLUSIONS

The large amount of data generated by the manpower study can serve as a basis for much additional analysis and interpretation. Following are six major factors and corresponding conclusions that are particularly pertinent to educational master planning. Although projections were made through 1985, the discussion focuses on the 1970's — a lead time frequently employed in manpower studies.

Manpower Demand

The Kansas labor force expansion rate is less than one percent per year; however, the rate of turnover is sufficiently great to create a net manpower demand in excess of 30,000 employees annually. During the 1970's 267,000 workers will die or retire, and these will be replaced

TABLE 3

COMPARISON OF ALTERNATE ESTIMATES OF THE 1975 KANSAS LABOR FORCE COMPOSITION BY OCCUPATIONAL GROUP

		Occupational Group, Percent of Total			
		Kansas Master Planning Commission Estimate			KESD/BLS Estimate
	Occupational Group	Male	Female	Male & Female	Male & Female
A.	Professional, Technical, and Kindred Workers	13.6	12.8	13.3	16.1
B.	Farmers and Farm Managers*	8.4	0.5	5.6	5.1
C.	Managers, Officials, and Proprietors (except Farm)	11.7	3.5	8.8	8.8
D.	Clerical and Kindred Workers	6.9	39.9	18.4	16.0
E.	Sales Workers	7.3	10.4	8.4	7.5
F.	Craftsmen, Foremen, and Kindred Workers	23.1	2.1	15.8	13.0
G.	Operatives and Kindred Workers	17.1	8.4	14.1	14.0
H.	Service Workers	4.3	18.8	9.4	13.9
I.	Farm Laborers and Foremen*	1.8	3.2	2.3	2.1
J.	Laborers (except Farm and Mine)	5.8	0.4	3.9	3.5

*Note that Table 3 compares occupational *groups* whereas Table 1 compared occupations. The high rankings of several non-farm groups relative to groups B and I (Table 3) are attributed to the large number of occupations that are included within these non-farm groups.

and augmented by 321,000 new employees. Thus almost a third of a million workers must be trained, educated, and otherwise prepared for entry into the world of work during this decade.

Age Composition

The substantial flow of workers into and out of employment status will bring about changes in the age composition of the Kansas labor force. The babies born during the post World War II population explosion reached job-entry age during the late 1960's and will be moving into established workforce positions in the 1970's.[8, 9] Now in their early 20's, this age group will provide an unprecedented number of young workers and will constitute a major portion of the total labor force.[10]

Women in the Labor Force

Whereas the male labor force participation rate has exhibited a recent downward trend in the United States due to earlier retirements, the percentage of women who work has increased and the trend is expected to continue but at a reduced rate. In Kansas, the female participation rate increased from 24.0 percent in 1950 to 35.0 percent in 1970 and is projected to further increase to 37.4 percent in 1985. During the next 15 years, the female labor force will expand 14 percent as compared to five percent for its male counterpart. Throughout this period, just under 60 percent of all job openings will be filled by women. Increased numbers of these jobs will be held by married women, mothers with young children, and older women.[11, 12, 13]

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[8]The 1970 population of the Kansas 20-24 age cohort was 188,422 – up 42.4 percent over 1960.

[9]U.S. Bureau of Census. "Revised Projections of the Population of States: 1970 to 1985," *Current Population Reports.* Series p–25, No. 375. U.S. Government Printing Office, Washington, D.C., 1967. Table 5.

[10]U.S. Bureau of Labor Statistics. *The U.S. Economy in 1980, A Summary of BLS Projections.* U.S. Government Printing Office, Washington, D.C., 1970.

[11]Federal Reserve Bank of Chicago. "More Working Wives, Fewer Children," *Business Conditions,* (August, 1970). 7

[12]Elizabeth Waldman. "Women at Work. Changes in the Labor Force Activity of Women," *Monthly Labor Review,* (June, 1970). 10

[13]U.S. Department of Labor. *U.S. Manpower in the 1970's. Opportunity and Challenge.* U.S. Government Printing Office, Washington, D.C., p.8.

Labor Force Distribution

The Kansas labor force is distributed in a widely variant pattern. This characteristic will continue in the future. The heterogeneous nature of the projected job opportunities in 1985 is illustrated in Figure 2. The most apparent variance in labor force distribution is between the western and eastern halves of the State with annual manpower requirements of the western half (regions 5–9) constituting less than 15 percent of the total.

The occupational profile is also widely divergent — even within local areas. For example in 1960, the highest and lowest percentage of workers in the managerial category were reported for two contiguous counties (Johnson – 23.0 percent and Wyandotte – 12.6 percent).

Occupational Distribution

It is projected that sometime late in the 1970's the number of white collar workers will exceed 50 percent of all jobs in Kansas. Blue collar workers will grow at a slower rate and will account for one out of three jobs by 1980. Service jobs will decline slightly to eight percent, and the farm labor force will decrease sharply from ten to six percent.

By 1980 more males (over 130,000) will work as craftsmen, foremen, and kindred workers than in any other group. The fastest growing segment of the male labor force during the 1970's will be the professional, technical group (+25%); the most significant decline will be farmers and farm managers (–36%).

The clerical group will continue to be the largest and fastest growing segment of the female labor force. By 1980 it will constitute 42 percent of all jobs and will have grown 24 percent during the 1970's. The most significant rate of decrease will be the service workers group (–10%).

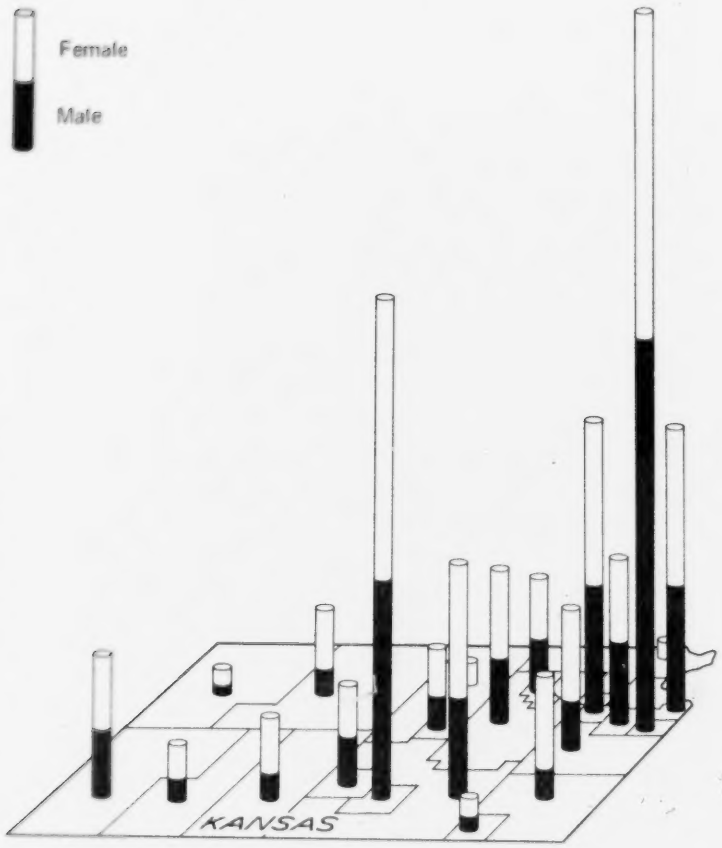
In general, occupational shifts occur as long-term trends rather than as sudden, dramatic changes. It is expected that this pattern will continue through the forecast period.

Job Preparation Requirements

Educational and training requirements vary widely throughout the State — particularly between dominantly rural and dominantly urban/suburban regions. A comparison for the year 1975 is presented in Table 4.

FIGURE 2

ESTIMATED ANNUAL MALE AND FEMALE LABOR FORCE NEEDS OF KANSAS BY REGION* FOR 1985



*Regions are defined in Figure 1

TABLE 4

PROJECTED EDUCATIONAL AND TRAINING REQUIREMENTS OF KANSAS RURAL AND URBAN/SUBURBAN LABOR MARKETS, 1975*

	Job Educational/Training Requirements		
	Four or More Years of College (ETPG 1)	One or Two Years Post-Secondary (ETPG 2, 3)	None Beyond Secondary (ETPG 4, 5)
Job Openings, Percent of Total Openings			
Rural	7.7	59.4	32.9
Urban/Suburban	13.6	62.1	24.3
Annual Labor Force Growth, Percent			
Rural	2.5	2.7	2.7
Urban/Suburban	4.4	4.1	3.4

*Rural regions are herein defined to include 1A, 2A, 3A, 4A, 5, 6, 7, 8, 9, 10A, and 11. Urban/suburban regions consist of nine counties having the largest labor forces: 1B, 1C, 1D, 1E, 2B, 3B, 4B, 4C, and 10B.

The following forecasts for the 1970's apply to the State as a whole:

- Three out of five job openings will require one to two years of post-secondary preparation. A majority of these will be in the crafts and other occupations where large numbers will be leaving the labor force due to death and retirement. A smaller but rapidly increasing number of these middle level openings will be in the medical and data processing fields. The employment outlook for women with one to two years of postsecondary clerical training will continue to be most favorable.

- The job market for persons with a baccalaureate or advanced degree will be highly competitive – especially the female segment. In the past, two out of three women employed in the professions were elementary and secondary teachers.[14] With enrollments declining, professional opportunities for women will likewise decline unless significant inroads are made into fields that have been traditionally occupied by men (e.g., law).[15]

- One out of four job openings will not require postsecondary training; however, of these, high school graduation will become an increasingly prevalent criterion. Employment prospects for unskilled and minimally educated males will be unfavorable.

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[14] Ibid., p.11.

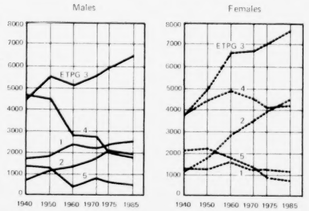
[15] Less than four percent of Kansas lawyers in 1960 were women – –up less than one percent from 1950.

APPENDIX

ANNUAL JOB OPENINGS CLASSIFIED BY EDUCATION AND TRAINING, OCCUPATIONAL GROUP, AND REGION OF KANSAS FOR 1940 TO 1985

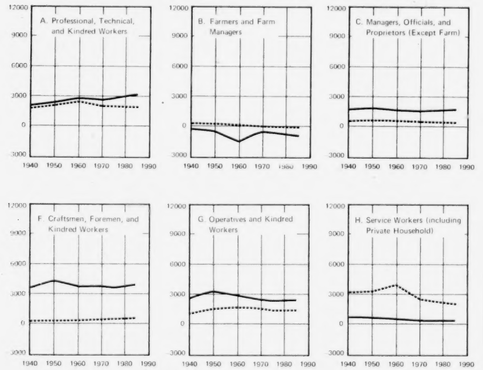
FOLD OUT FOR DEFINITIONS USED IN APPENDIX

ANNUAL JOB OPENINGS CLASSIFIED BY ETPG



See footout sheet for definitions

ANNUAL JOB OPENINGS CLASSIFIED BY


A. Professional, Technical, and Kindred Workers
B. Farmers and Farm Managers
C. Managers, Officials, and Proprietors (Except Farm)
F. Craftsmen, Foremen, and Kindred Workers
G. Operatives and Kindred Workers
H. Service Workers (including Private Household)
1940 1950 1960 1970 1980 1990

ETPGs (Educational and Training Preparation Groups)

1. Four or more years of college
2. Either one to three years of college (technical and/or non-technical) or business school programs
3. High school attendance or graduation *plus* either apprenticeship training or trade technical certificate programs
4. High school attendance or graduation *plus* brief training
5. No training

Occupational Groups
and Representative Occupations Within Groups

A. Professional, Technical, and Kindred Workers
- Accountant
- Architect
- Dentist
- Designer
- Dietitian
- Engineer
- Librarian
- Social worker
- Therapist

B. Farmers and Farm Managers
- Farm owner
- Farm tenant
- Farm manager

C. Managers, Officials, and Proprietors (except Farm)
- Buyer, department store
- Credit man
- Inspector, public administration
- Manager
- Postmaster
- Purchasing Agent

D. Clerical and Kindred Workers
- Attendant, dental office
- Baggageman
- Cashier
- Stenographer

E. Sales Workers
- Advertising agent
- Retail salesman

F. Craftsmen, Foremen, and Kindred Workers
- Carpenter
- Inspector, construction
- Stationary engineer

G. Operatives and Kindred Workers
- Apprentice machinist
- Bus driver
- Power station operator
- Welder

H. Service Workers
- Cook
- Policeman
- Licensed practical nurse

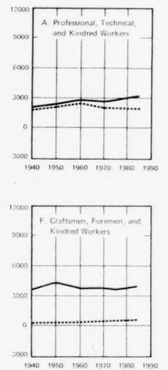
I. Farm Laborers and Foreman
- Farm foreman
- Farm laborer, unpaid family worker
- Farm service laborer

J. Laborers (except Farm and Mine)
- Carpenter's helper
- Fisherman
- Teamster

ANNUAL JOB OPENINGS CLASSIFIED BY ETPG

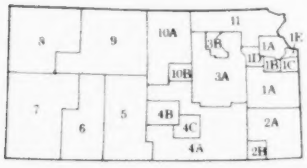
See footout sheet for definitions

ANNUAL J



KANSAS

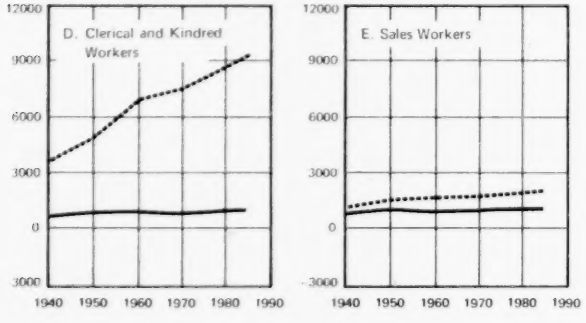
(Total of 20 Regions)

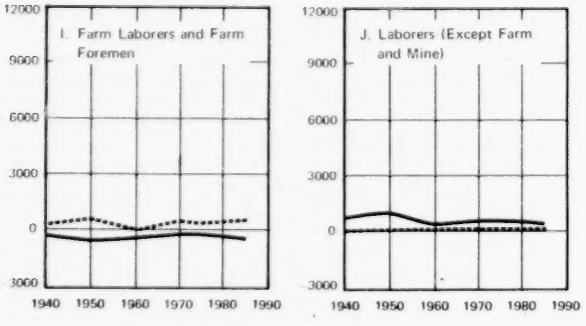


REGIONAL STATISTICS (1970)

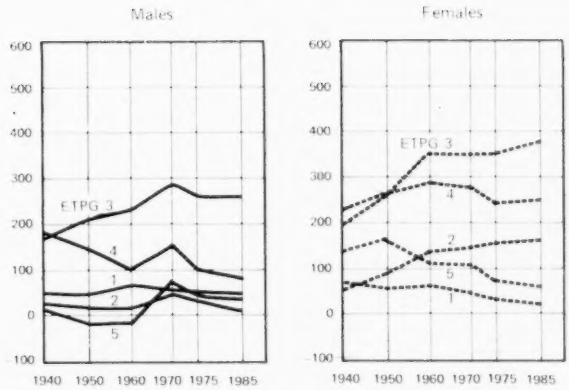
Population – 2,246,578
Grade Twelve Enrollment – 35,255
Estimated Labor Force:
Male – 558,000
Female – 298,000
Total – 856,000

OCCUPATIONAL GROUP



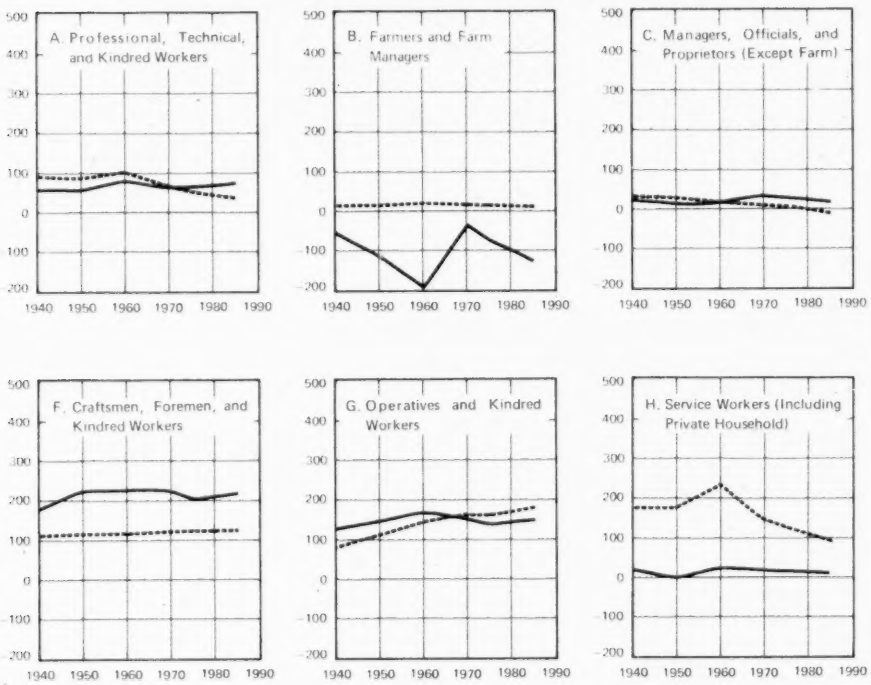


ANNUAL JOB OPENINGS CLASSIFIED BY ETPG

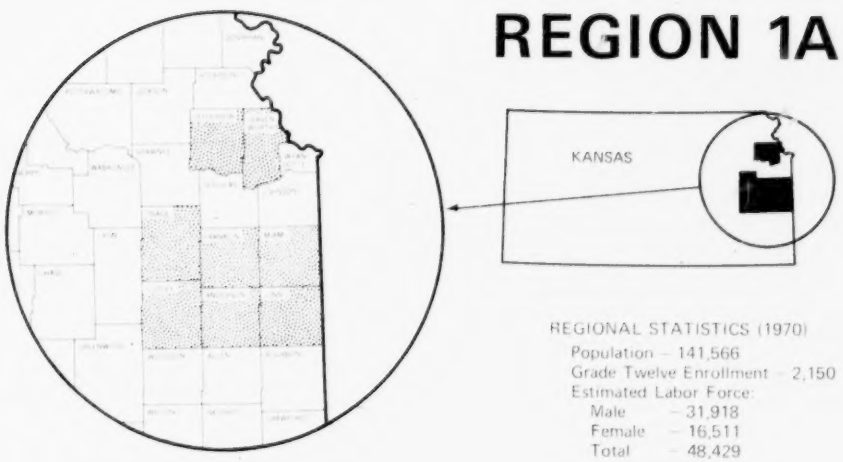


See foldout sheet for definitions

ANNUAL JOB OPENINGS CLASSIFIED BY



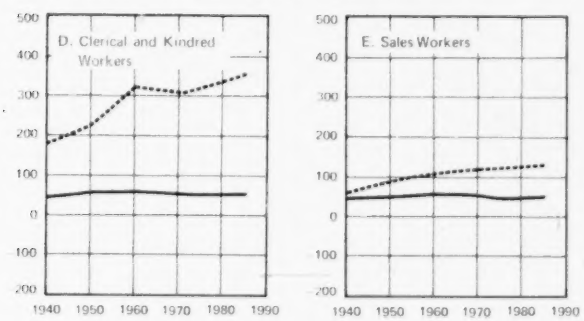
REGION 1A

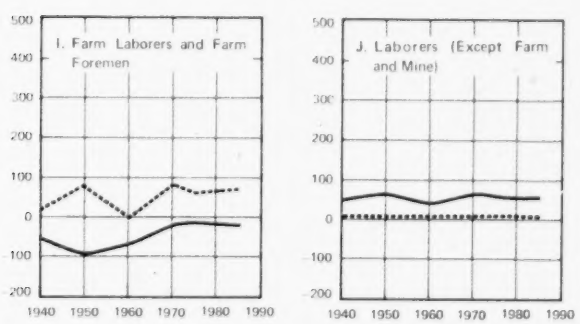


REGIONAL STATISTICS (1970)

Population – 141,566
Grade Twelve Enrollment – 2,150
Estimated Labor Force:
Male – 31,918
Female – 16,511
Total – 48,429

OCCUPATIONAL GROUP





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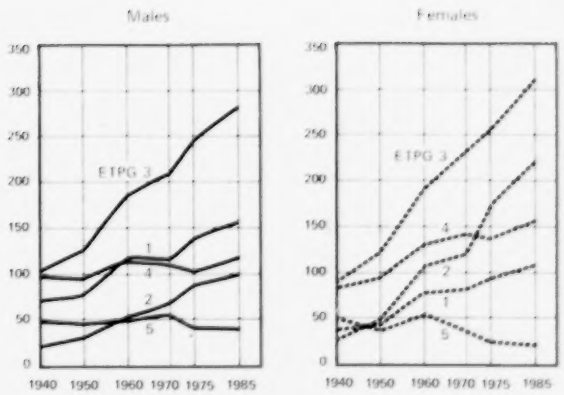

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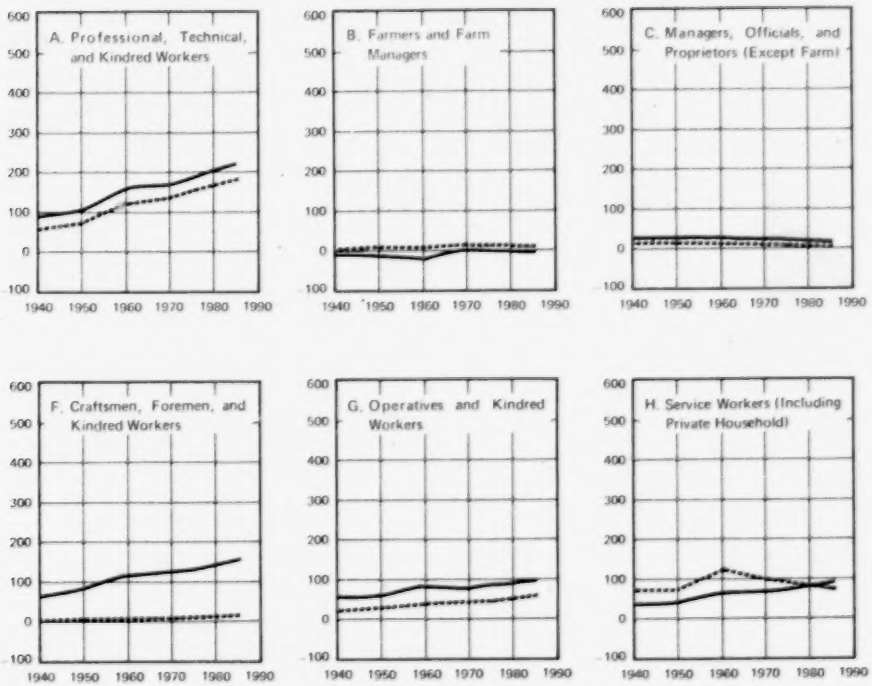

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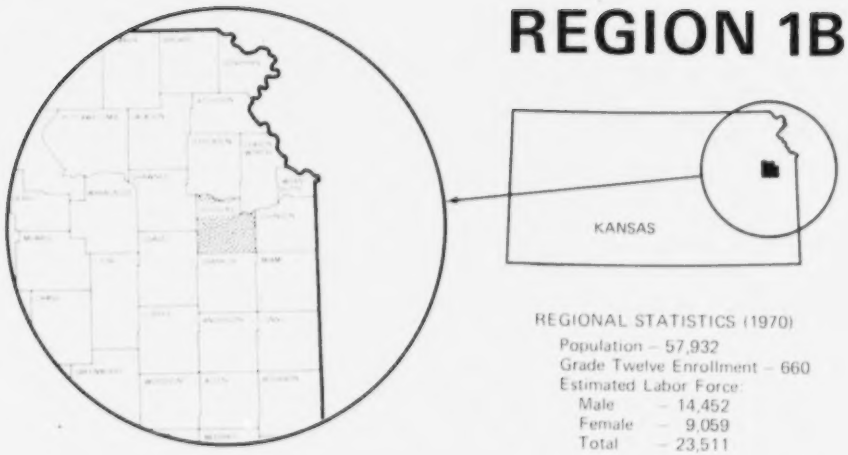
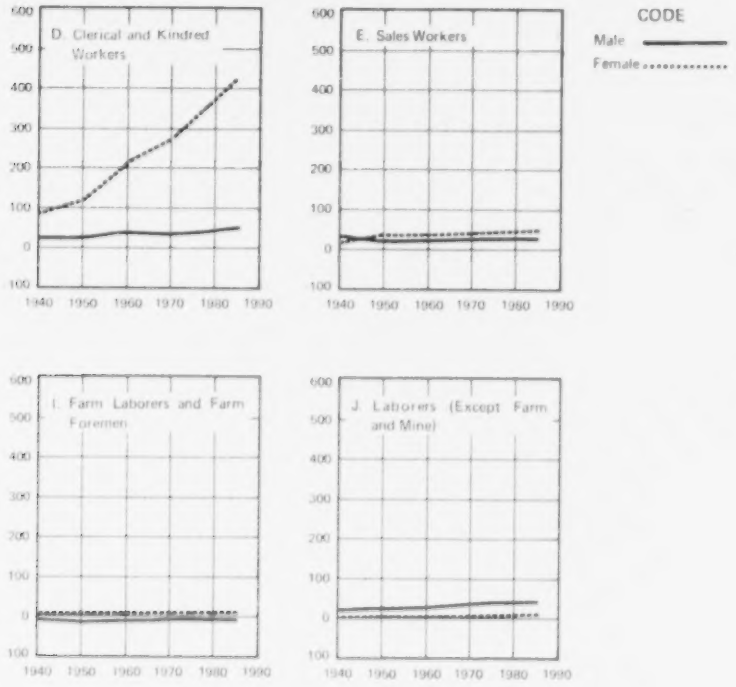


REGIONAL STATISTICS (1970)

Population – 57,932
Grade Twelve Enrollment – 660
Estimated Labor Force:
Male – 14,452
Female – 9,059
Total – 23,511

OCCUPATIONAL GROUP



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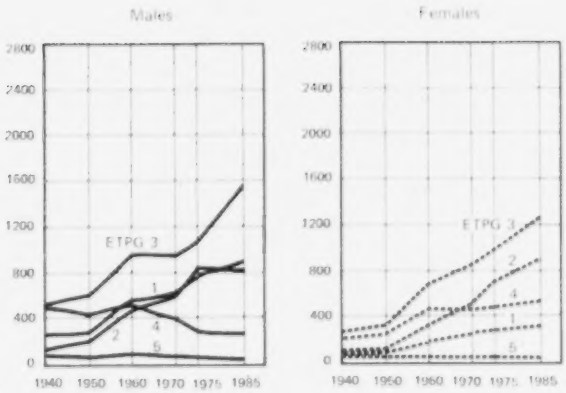

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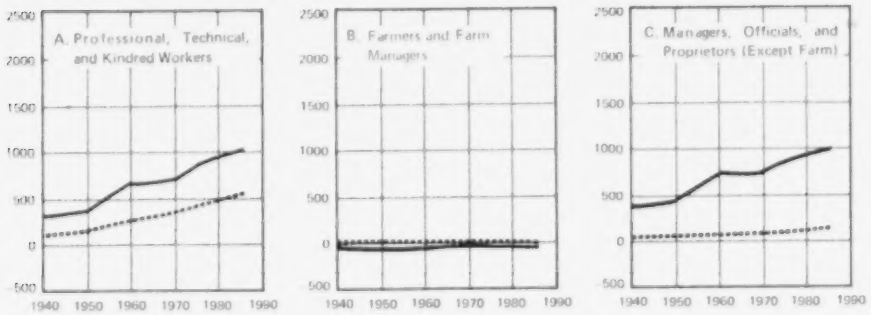

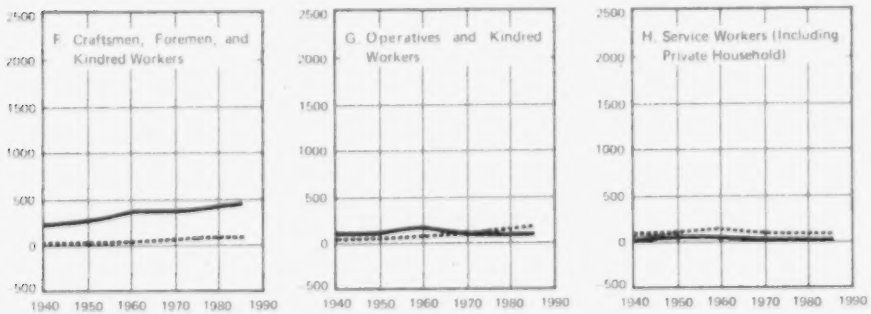

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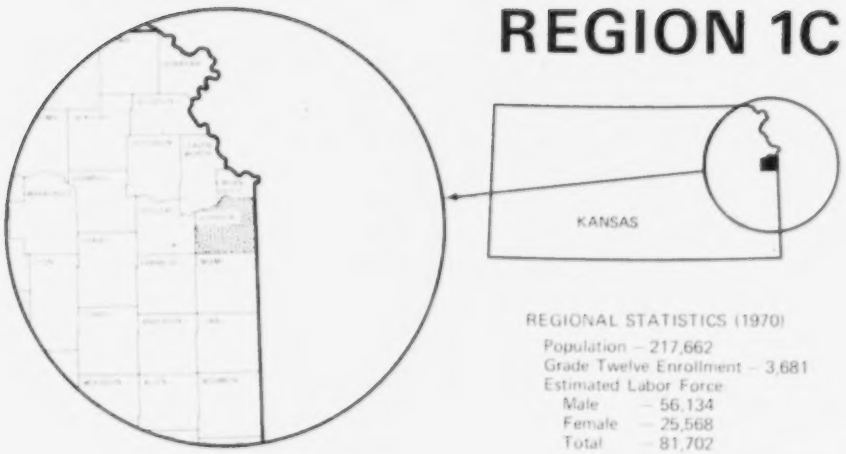
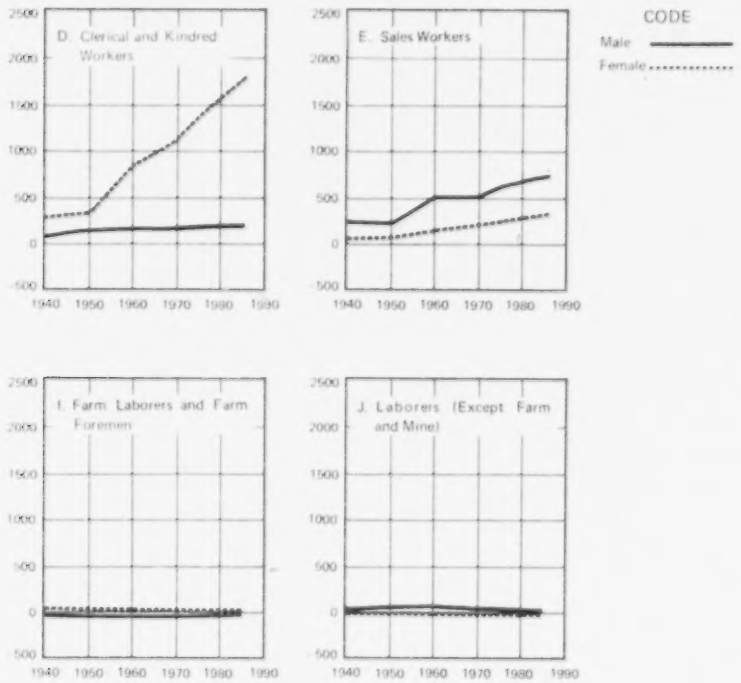


REGIONAL STATISTICS (1970)

Population – 217,662
Grade Twelve Enrollment – 3,681
Estimated Labor Force
Male – 56,134
Female – 25,568
Total – 81,702

OCCUPATIONAL GROUP



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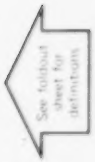

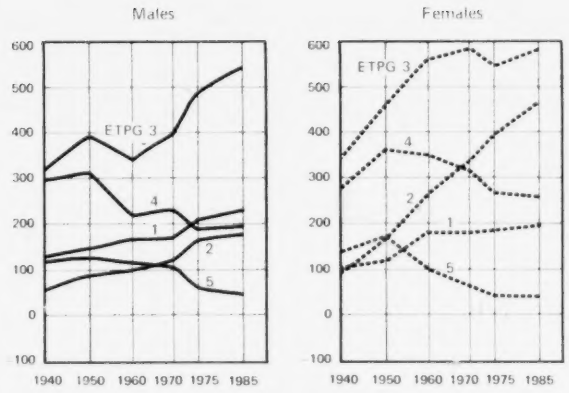

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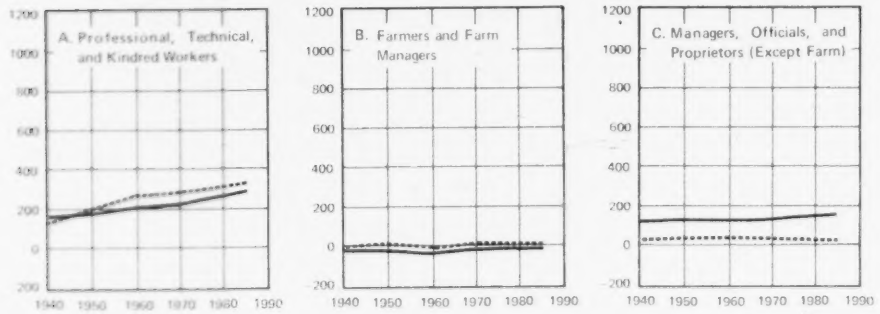
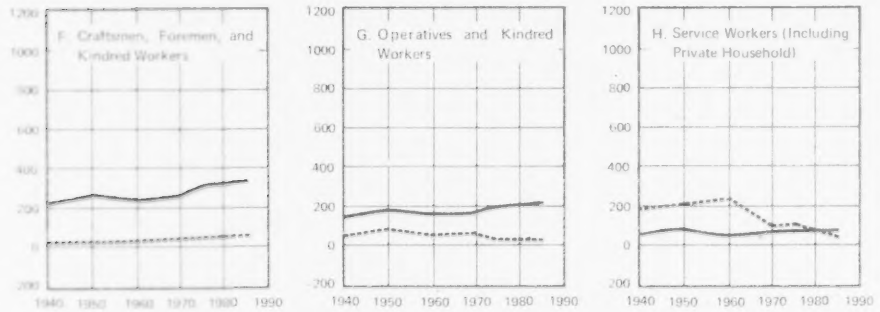
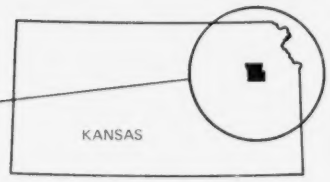




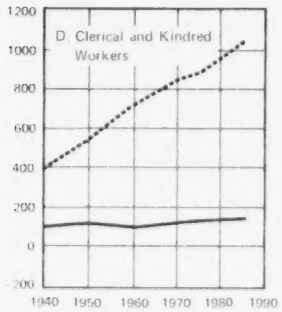
REGION 1D

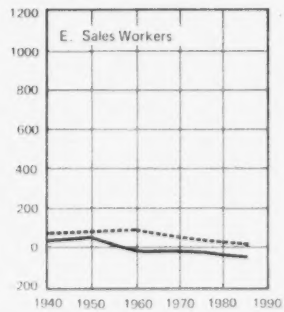


REGIONAL STATISTICS (1970)

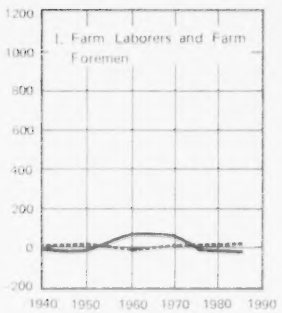
Population – 155,322
Grade Twelve Enrollment – 2,116
Estimated Labor Force:
- Male – 34,875
- Female – 25,032
- Total – 59,907

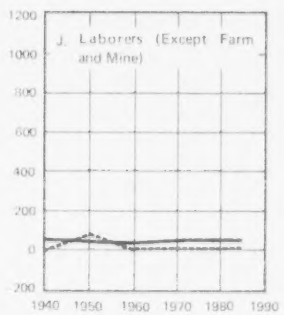
OCCUPATIONAL GROUP





CODE
Male ——
Female .....





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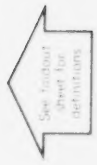

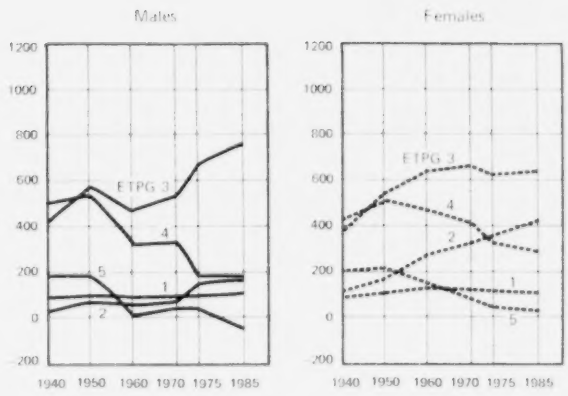

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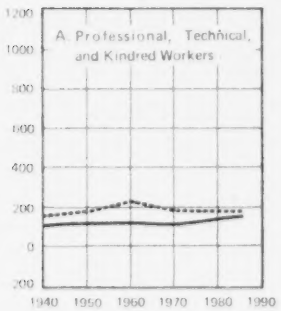
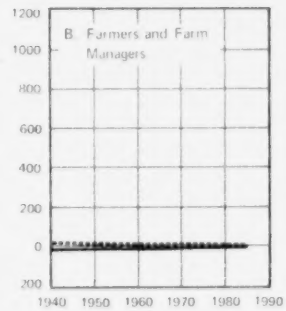
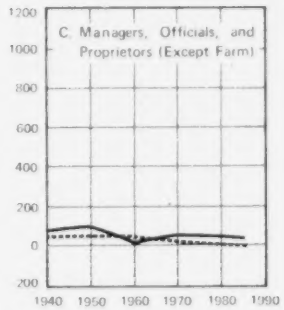
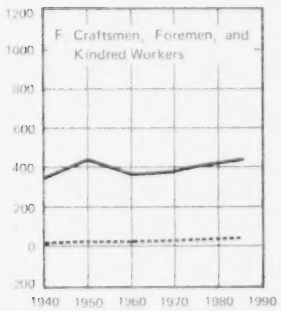
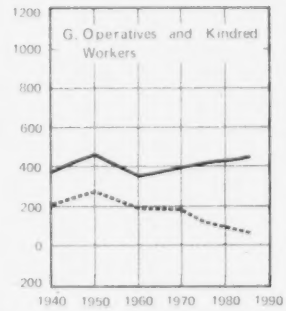
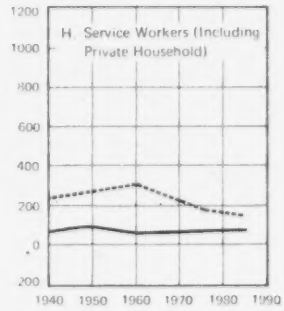




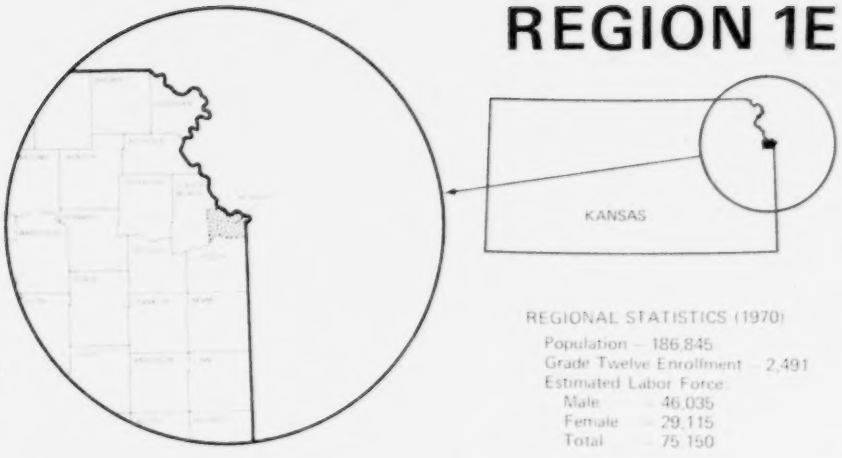








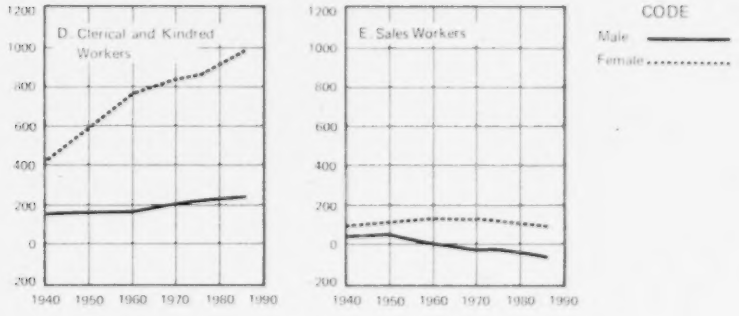
REGION 1E

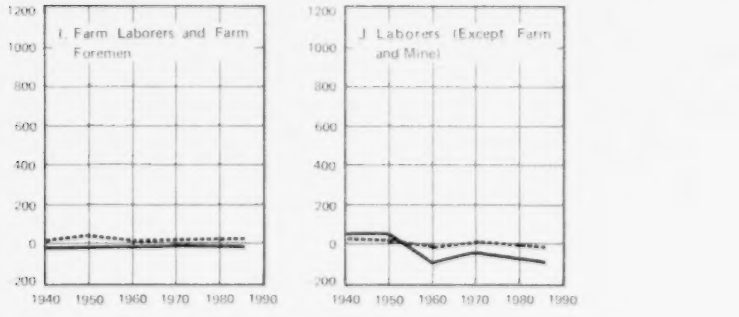


REGIONAL STATISTICS (1970)

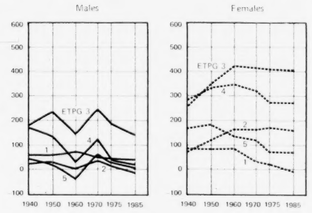
Population — 186,845
Grade Twelve Enrollment — 2,491
Estimated Labor Force:
Male — 46,035
Female — 29,115
Total — 75,150

OCCUPATIONAL GROUP



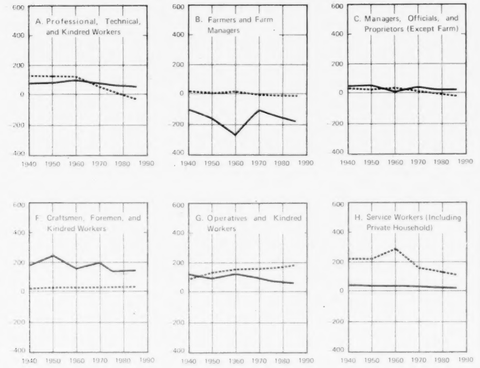


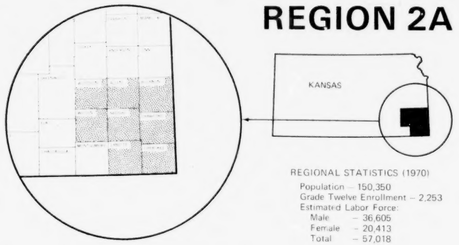
ANNUAL JOB OPENINGS CLASSIFIED BY ETPG



See foldout sheet for definitions

ANNUAL JOB OPENINGS CLASSIFIED BY OCCUPATIONAL GROUP


A. Professional, Technical, and Kindred Workers
B. Farmers and Farm Managers
C. Managers, Officials, and Proprietors (Except Farm)
F. Craftsmen, Foremen, and Kindred Workers
G. Operatives and Kindred Workers
H. Service Workers (Including Private Household)

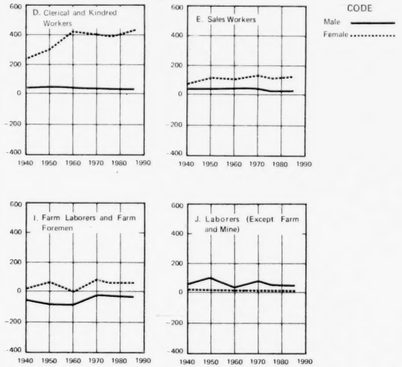


REGION 2A

REGIONAL STATISTICS (1970)

Population – 150,350
Grade Twelve Enrollment – 2,253
Estimated Labor Force:
Male – 36,605
Female – 20,413
Total – 57,018

OCCUPATIONAL GROUP



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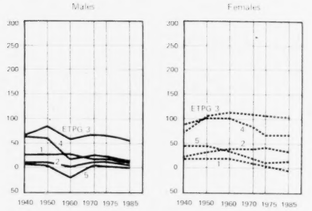
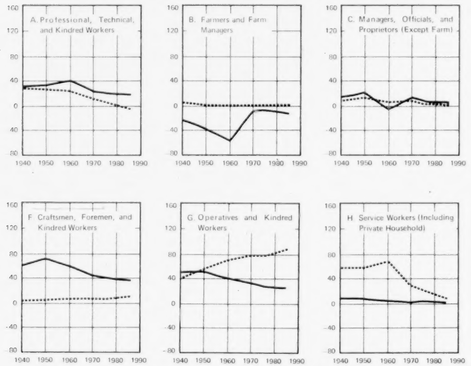
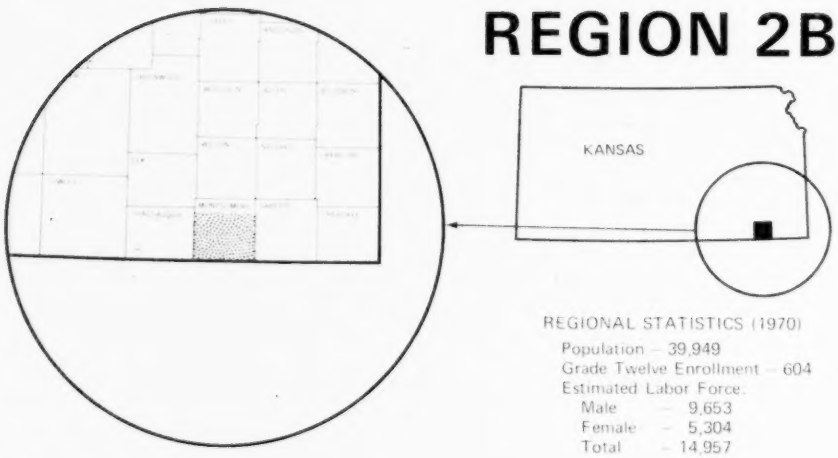


See foldout sheet for definitions

ANNUAL JOB OPENINGS CLASSIFIED BY OCCUPATIONAL GROUP


A. Professional, Technical, and Kindred Workers
B. Farmers and Farm Managers
C. Managers, Officials, and Proprietors (Except Farm)
F. Craftsmen, Foremen, and Kindred Workers
G. Operatives and Kindred Workers
H. Service Workers (Including Private Household)

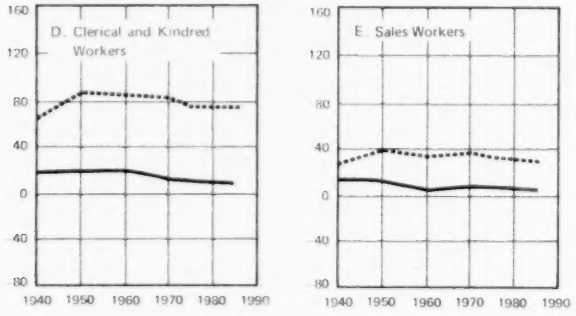
REGION 2B

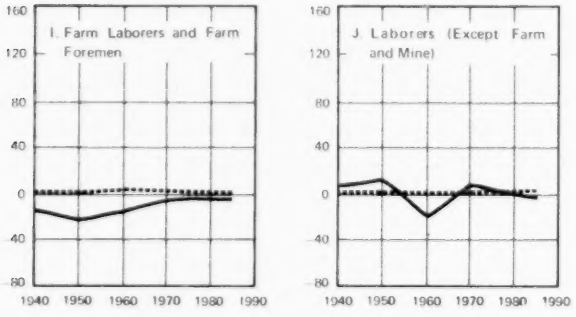


REGIONAL STATISTICS (1970)

Population – 39,949
Grade Twelve Enrollment – 604
Estimated Labor Force:
Male – 9,653
Female – 5,304
Total – 14,957

OCCUPATIONAL GROUP





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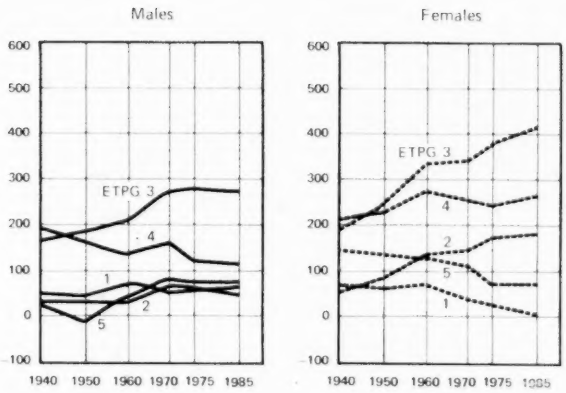

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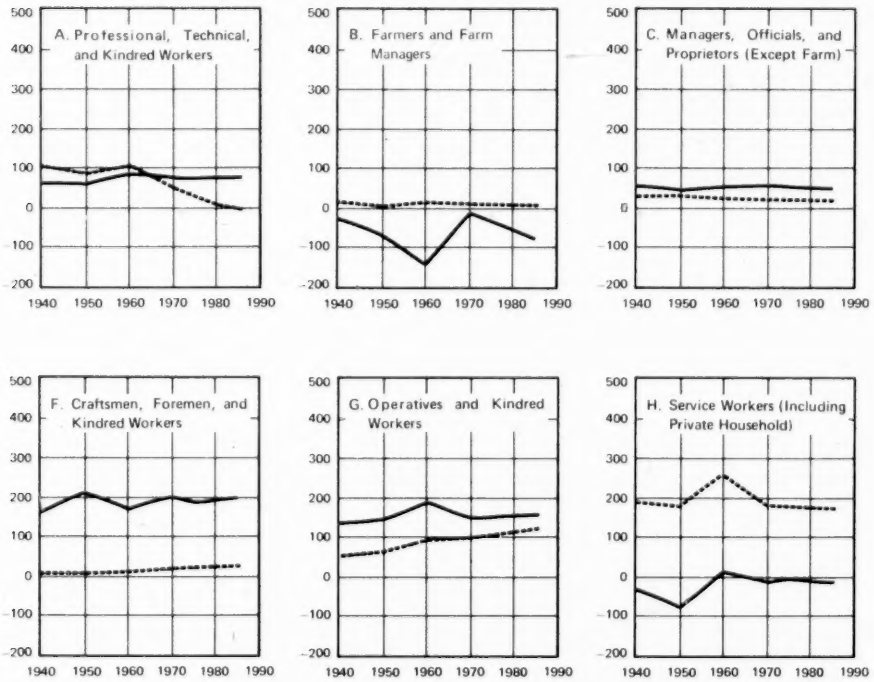
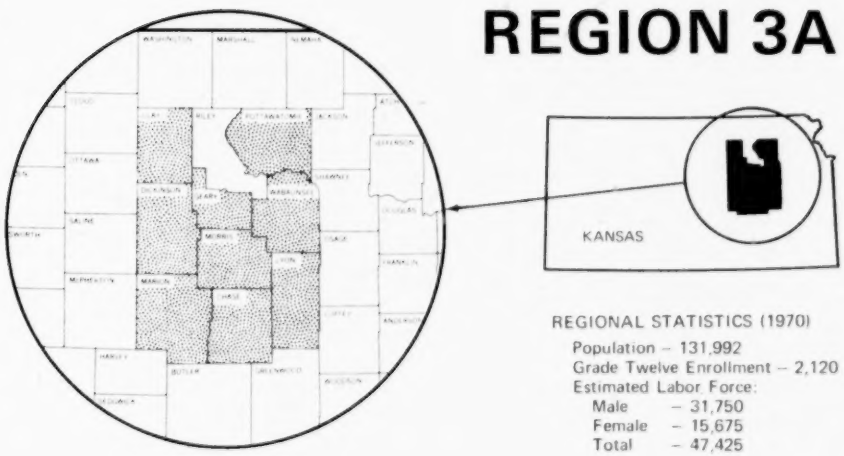


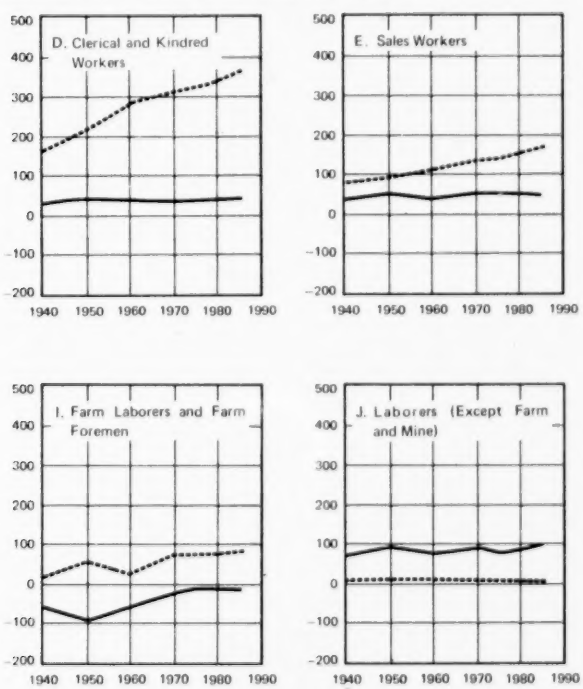
REGION 3A



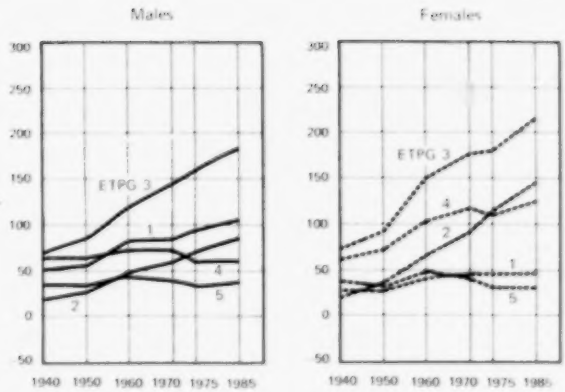
REGIONAL STATISTICS (1970)

Population – 131,992
Grade Twelve Enrollment – 2,120
Estimated Labor Force:
Male – 31,750
Female – 15,675
Total – 47,425

OCCUPATIONAL GROUP

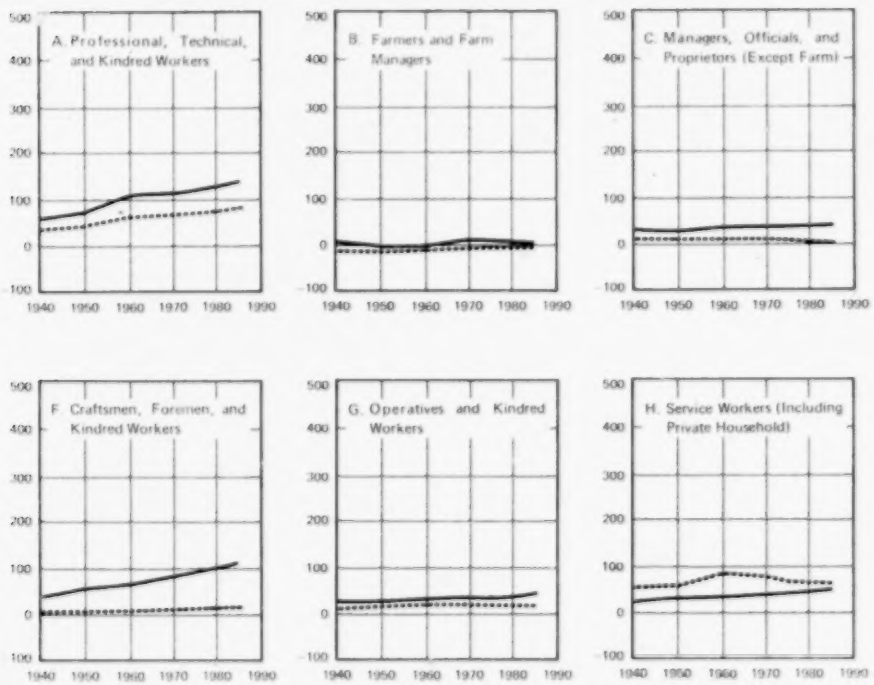


ANNUAL JOB OPENINGS CLASSIFIED BY ETPG

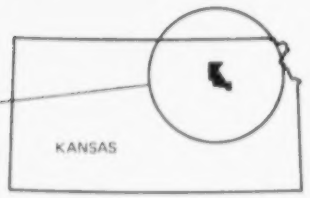


See fold-out sheet for definitions

ANNUAL JOB OPENINGS CLASSIFIED BY


A. Professional, Technical, and Kindred Workers
B. Farmers and Farm Managers
C. Managers, Officials, and Proprietors (Except Farm)
F. Craftsmen, Foremen, and Kindred Workers
G. Operatives and Kindred Workers
H. Service Workers (Including Private Household)
1940 1950 1960 1970 1980 1990

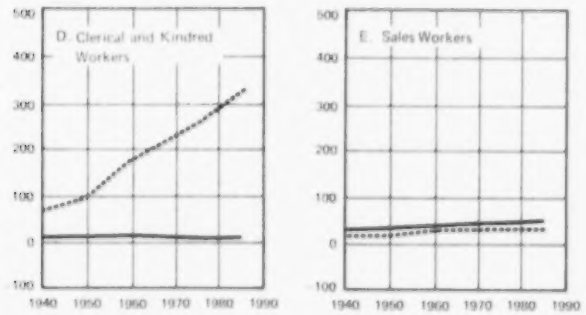
REGION 3B

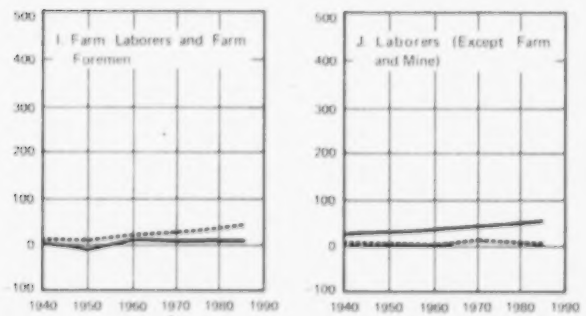


REGIONAL STATISTICS (1970)

Population – 56,788
Grade Twelve Enrollment – 443
Estimated Labor Force:
Male – 10,825
Female – 7,064
Total – 17,889

OCCUPATIONAL GROUP





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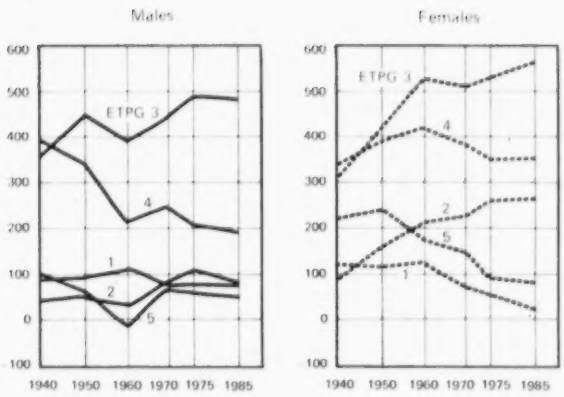

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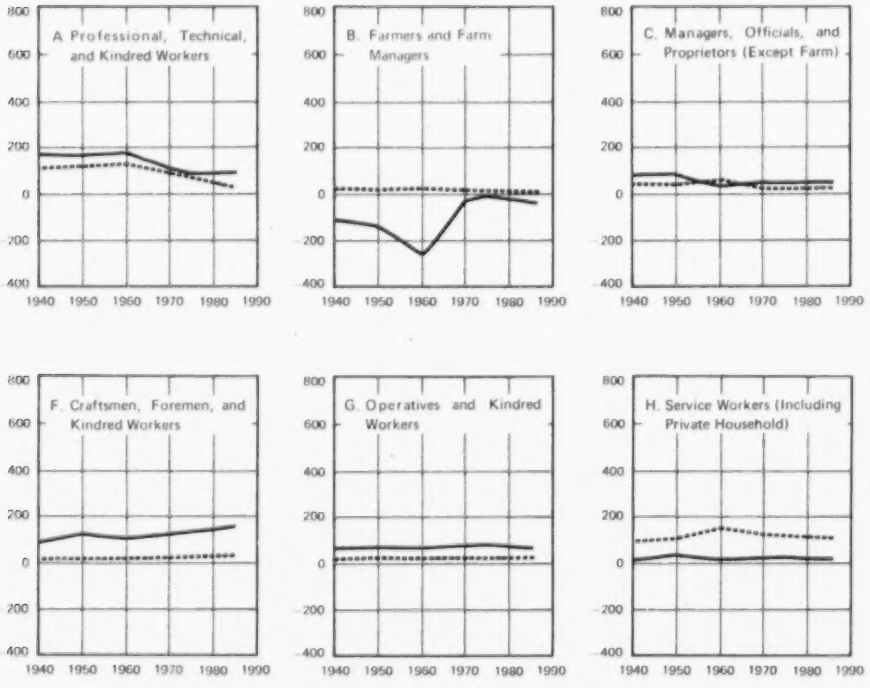
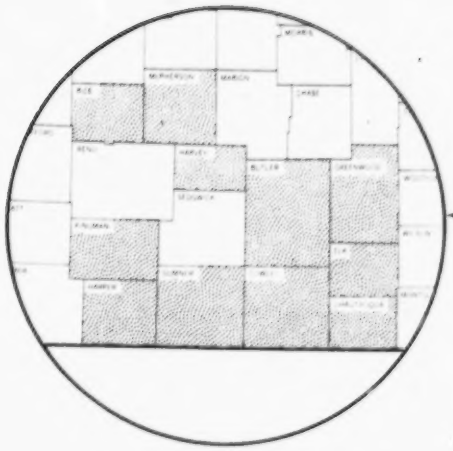
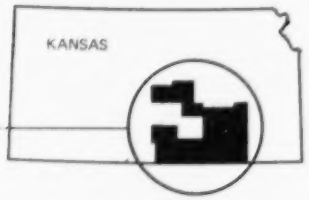


REGION 4A

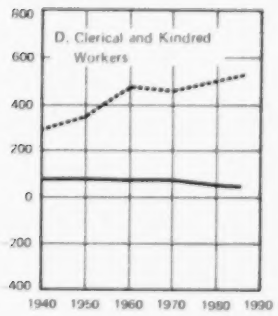


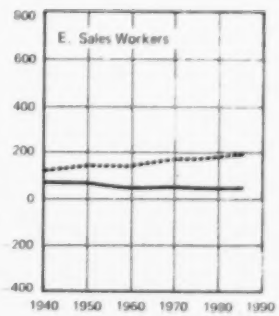


REGIONAL STATISTICS (1970)

Population – 195,955
Grade Twelve Enrollment – 3,459
Estimated Labor Force:
Male – 51,336
Female – 24,943
Total – 76,279

OCCUPATIONAL GROUP





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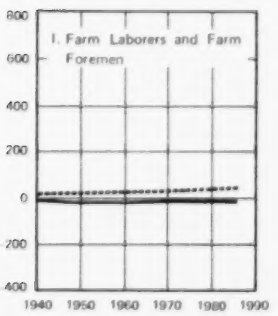
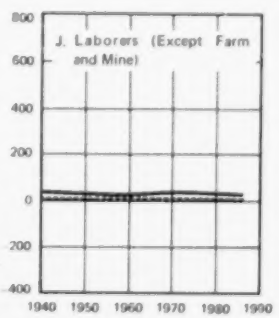
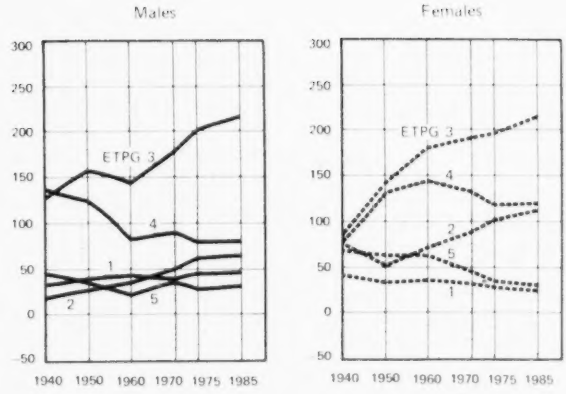
Female .....



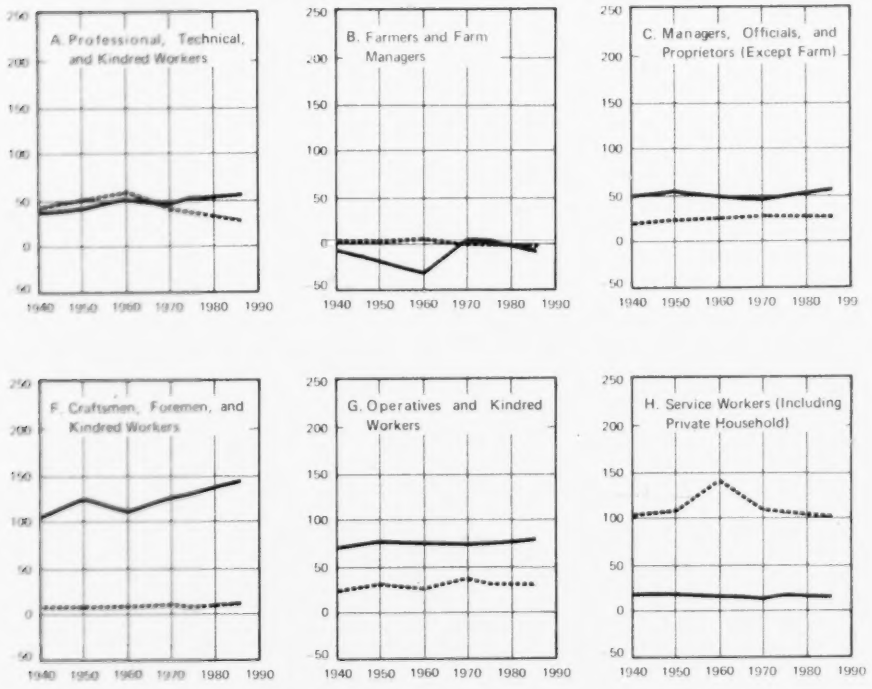


ANNUAL JOB OPENINGS CLASSIFIED BY ETPG

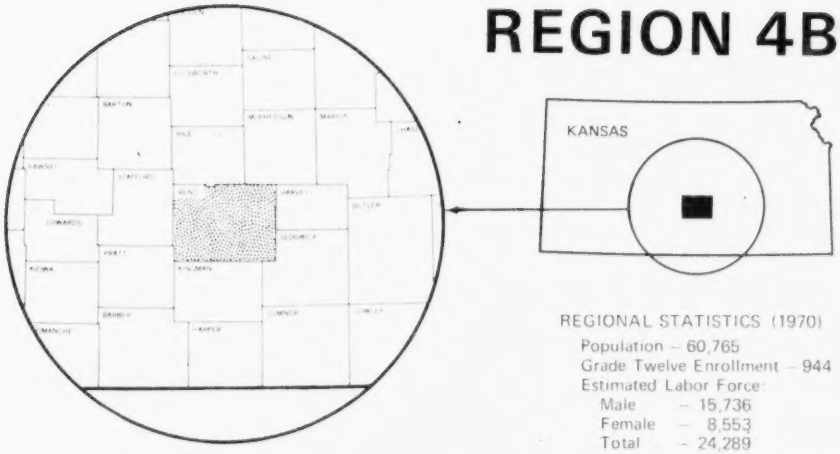


See foldout sheet for definitions

ANNUAL JOB OPENINGS CLASSIFIED BY


A. Professional, Technical, and Kindred Workers
B. Farmers and Farm Managers
C. Managers, Officials, and Proprietors (Except Farm)
F. Craftsmen, Foremen, and Kindred Workers
G. Operatives and Kindred Workers
H. Service Workers (Including Private Household)
1940 1950 1960 1970 1980 1990

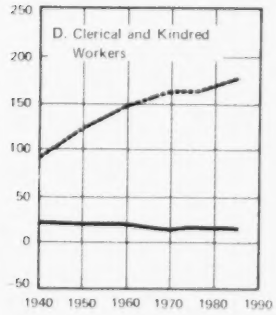
REGION 4B

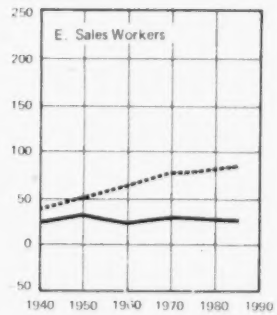


REGIONAL STATISTICS (1970)

Population – 60,765
Grade Twelve Enrollment – 944
Estimated Labor Force:
Male – 15,736
Female – 8,553
Total – 24,289

OCCUPATIONAL GROUP





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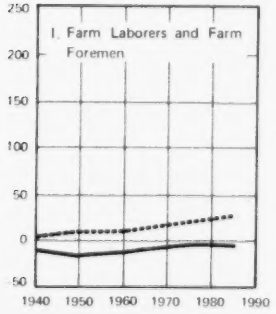
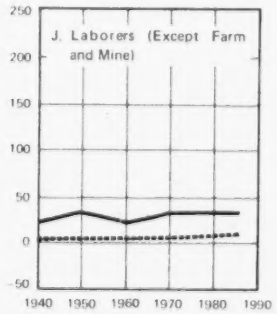
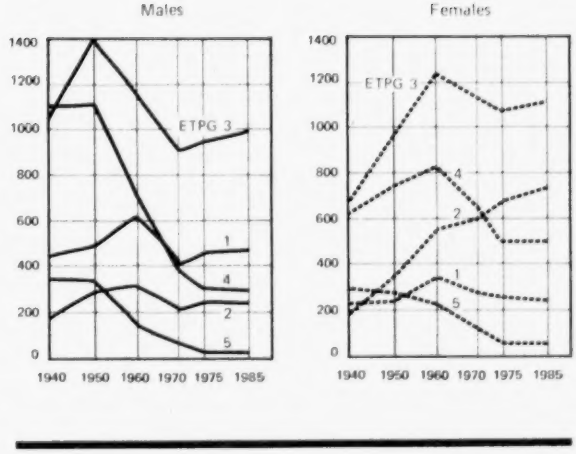
Male ——
Female .....





ANNUAL JOB OPENINGS CLASSIFIED BY ETPG



See foldout sheet for definitions

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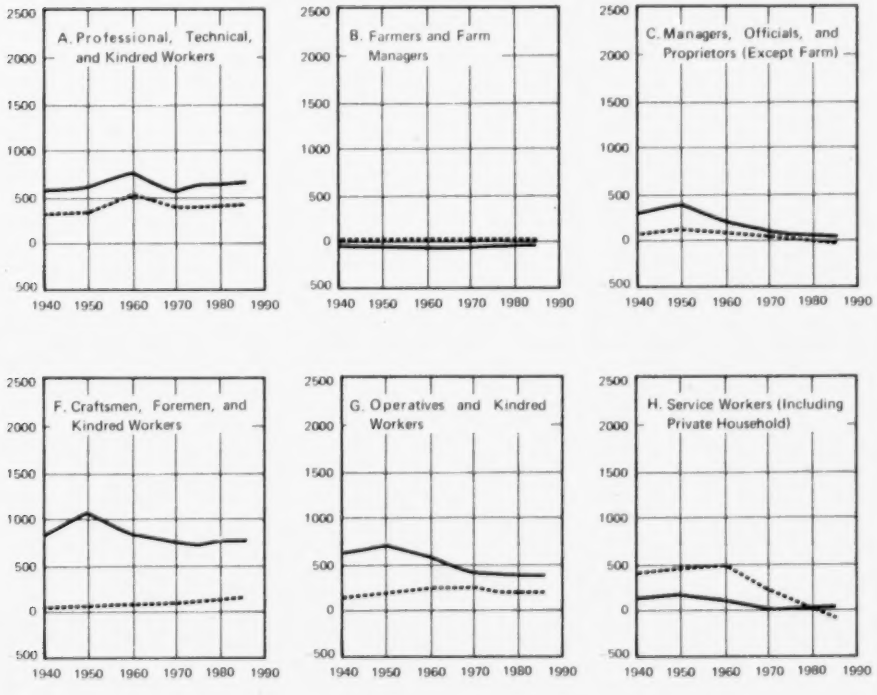
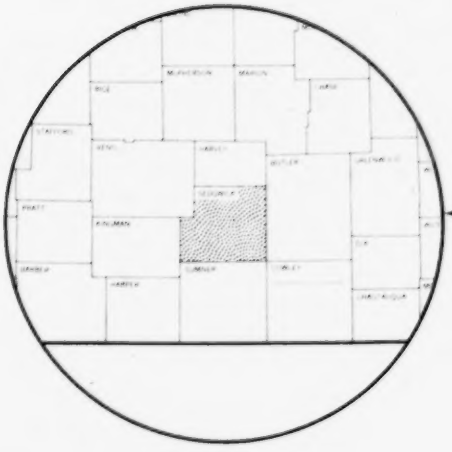
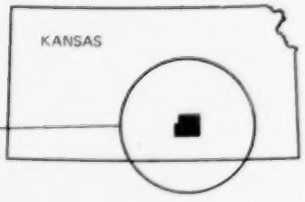


REGION 4C

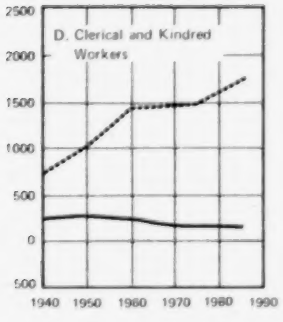


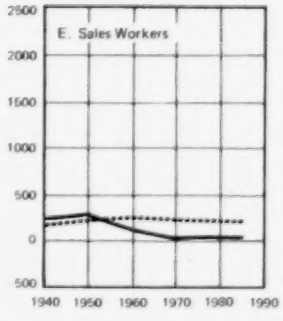


REGIONAL STATISTICS (1970)

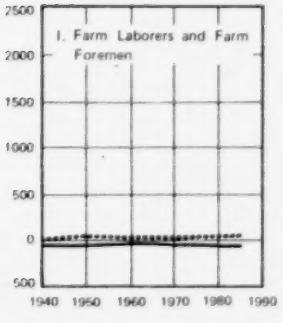
Population – 350,694
Grade Twelve Enrollment – 5,208
Estimated Labor Force:
Male – 87,550
Female – 49,558
Total – 137,108

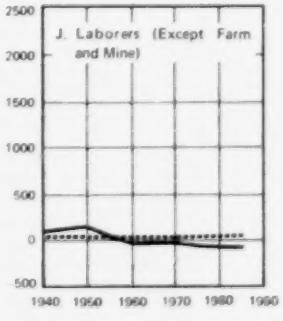
OCCUPATIONAL GROUP



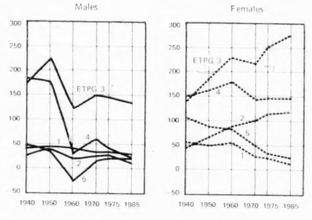


CODE
Male ——
Female .....



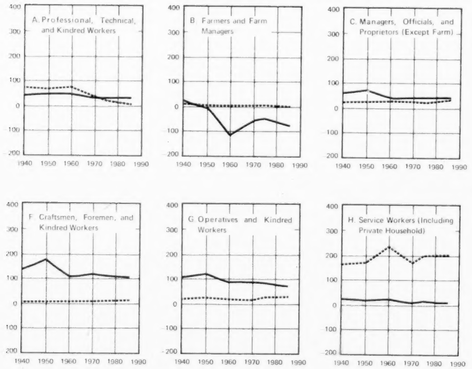


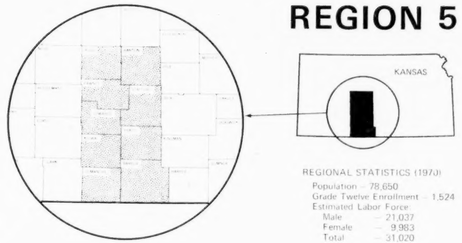
ANNUAL JOB OPENINGS CLASSIFIED BY ETPG



See footnotes for ETPG definitions

ANNUAL JOB OPENINGS CLASSIFIED BY OCCUPATIONAL GROUP

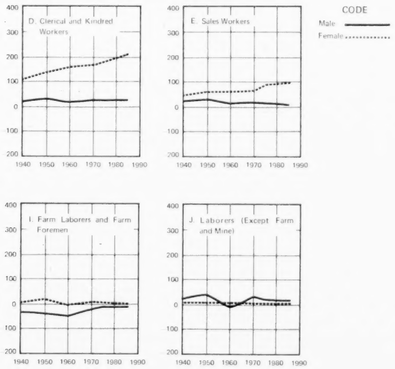

A. Professional, Technical, and Kindred Workers
B. Farmers and Farm Managers
C. Managers, Officials, and Proprietors (Except Farm)
F. Craftsmen, Foremen, and Kindred Workers
G. Operatives and Kindred Workers
H. Service Workers (Including Private Household)
1940 1950 1960 1970 1980 1990



REGION 5

REGIONAL STATISTICS (1970)
Population — 78,650
Grade Twelve Enrollment — 1,524
Estimated Labor Force:
Male — 21,037
Female — 9,983
Total — 31,020

ANNUAL JOB OPENINGS CLASSIFIED BY OCCUPATIONAL GROUP



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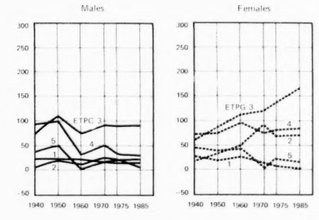
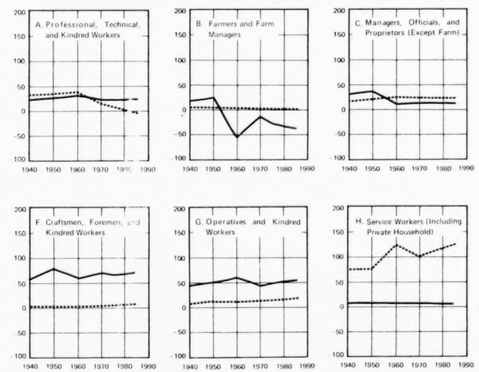
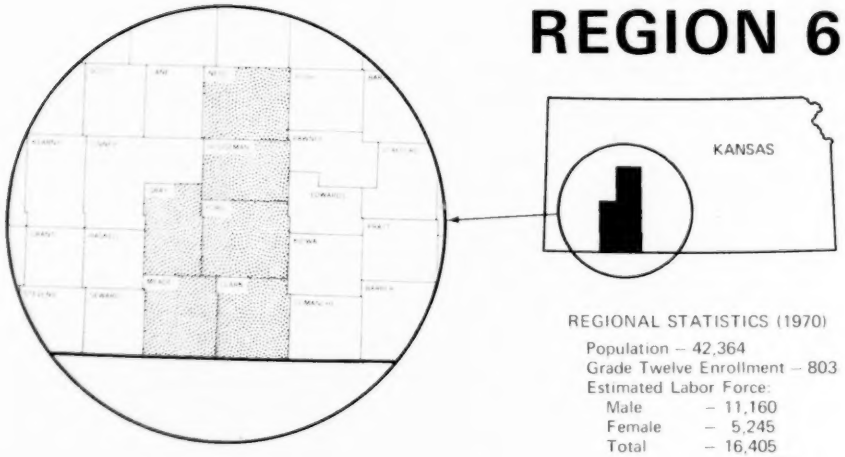


See footnotes for ETPG definitions

ANNUAL JOB OPENINGS CLASSIFIED BY OCCUPATIONAL GROUP


A. Professional, Technical, and Kindred Workers
B. Farmers and Farm Managers
C. Managers, Officials, and Proprietors (Except Farm)
F. Craftsmen, Foremen, and Kindred Workers
G. Operatives and Kindred Workers
H. Service Workers (Including Private Household)
1940 1950 1960 1970 1980 1990

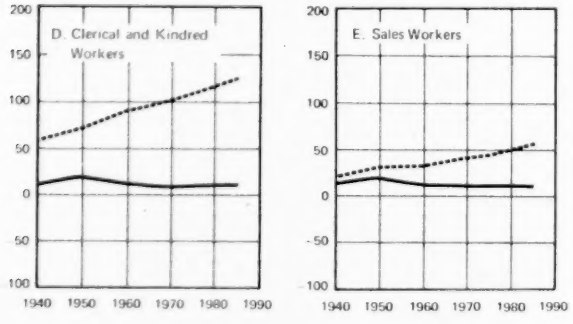
REGION 6

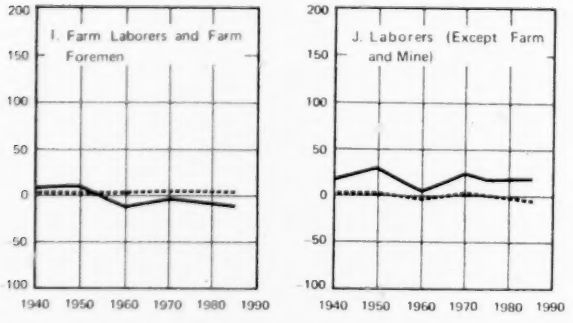


REGIONAL STATISTICS (1970)

Population – 42,364
Grade Twelve Enrollment – 803
Estimated Labor Force:
Male – 11,160
Female – 5,245
Total – 16,405

OCCUPATIONAL GROUP





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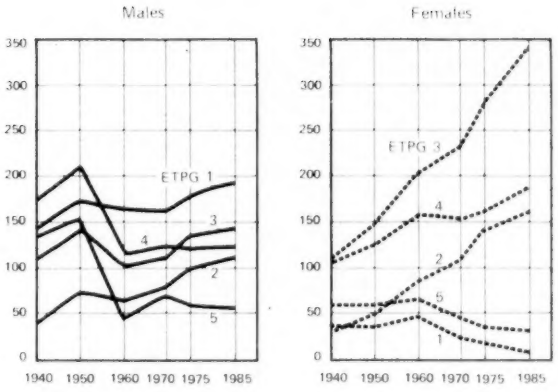
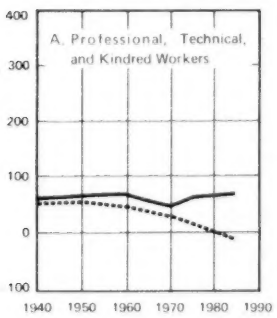
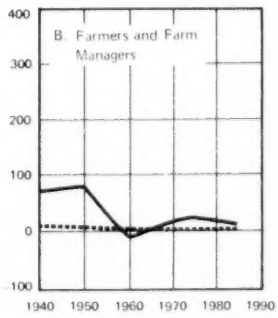
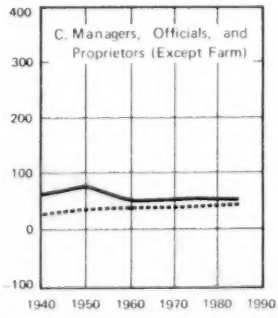


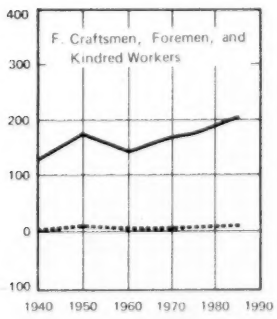
See fold-out sheet for definitions

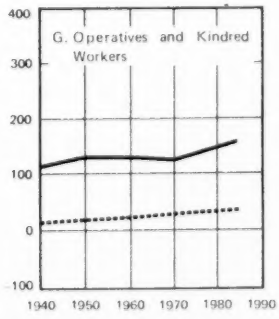
ANNUAL JOB OPENINGS CLASSIFIED BY

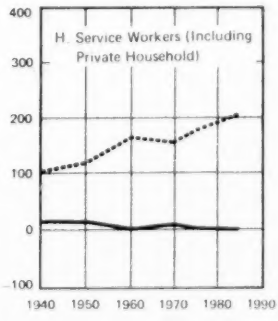


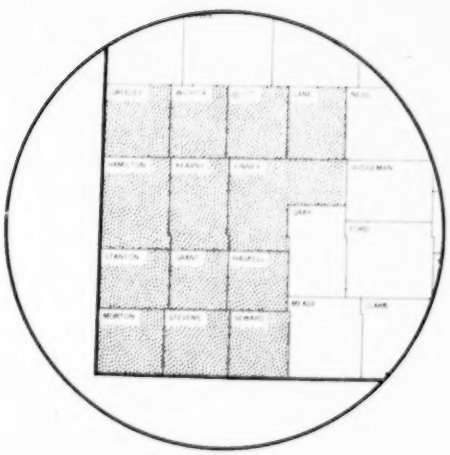




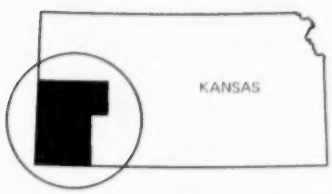








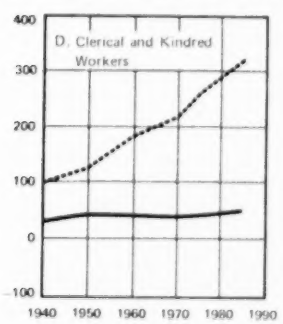
REGION 7

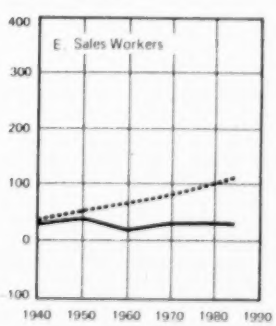


REGIONAL STATISTICS (1970)

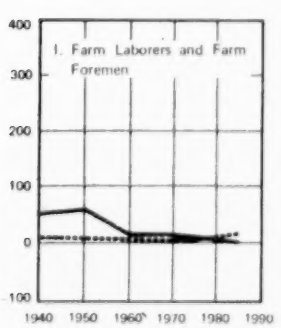
Population – 73,585
Grade Twelve Enrollment – 1,460
Estimated Labor Force:
Male – 20,423
Female – 8,642
Total – 29,065

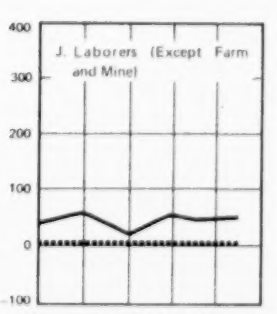
OCCUPATIONAL GROUP



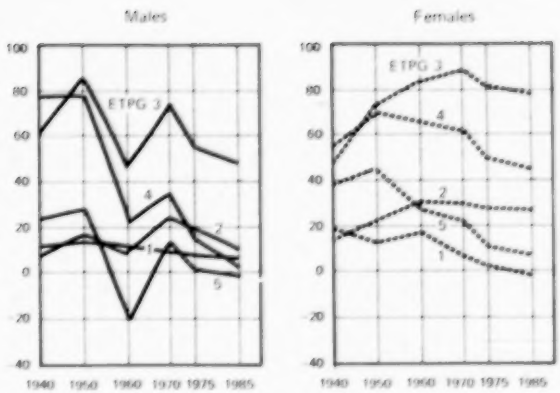


CODE
Male ——
Female .....



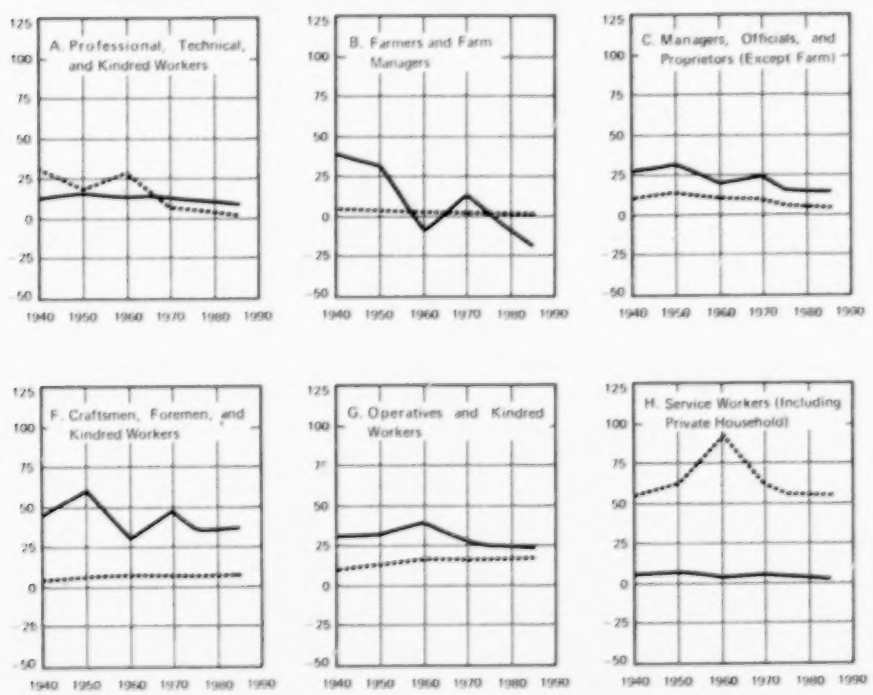


ANNUAL JOB OPENINGS CLASSIFIED BY ETPG

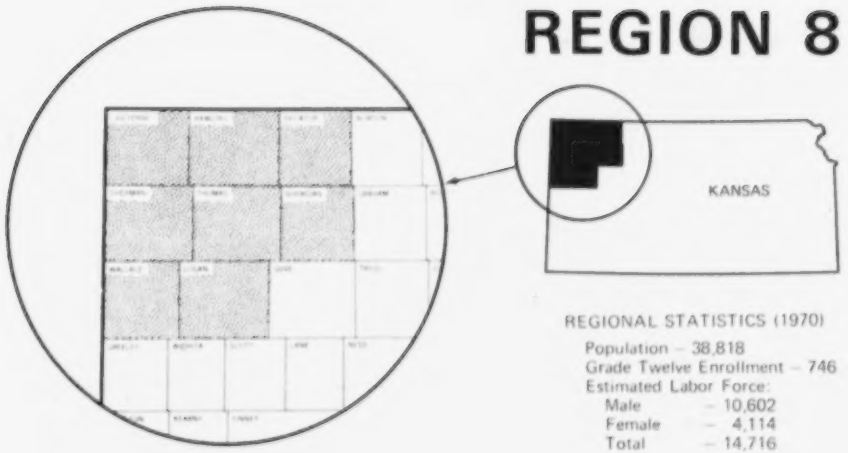


See foldout sheet for definitions

ANNUAL JOB OPENINGS CLASSIFIED BY



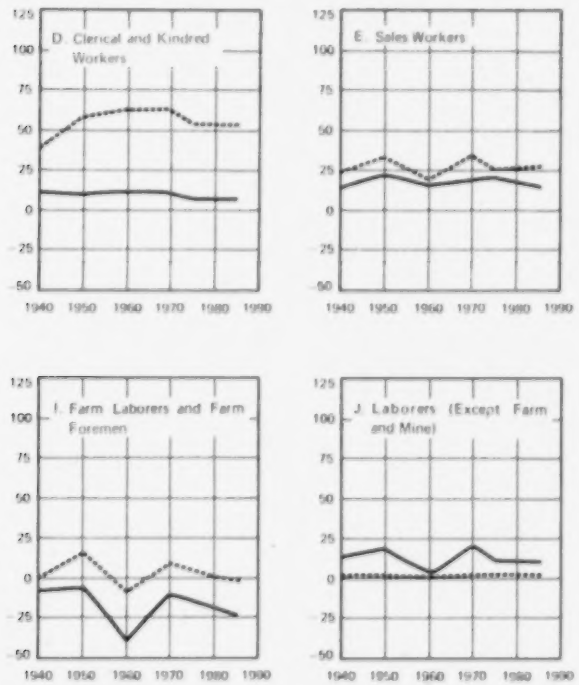
REGION 8



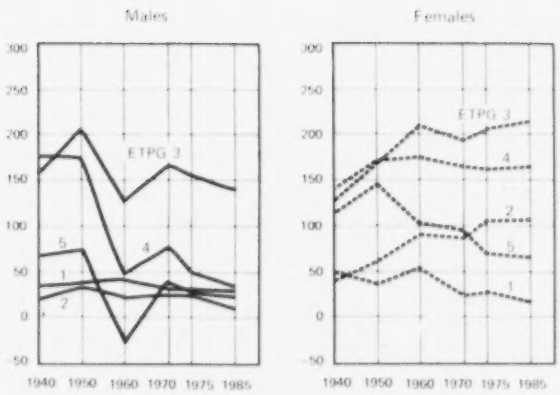
REGIONAL STATISTICS (1970)

Population – 38,818
Grade Twelve Enrollment – 746
Estimated Labor Force:
Male – 10,602
Female – 4,114
Total – 14,716

OCCUPATIONAL GROUP

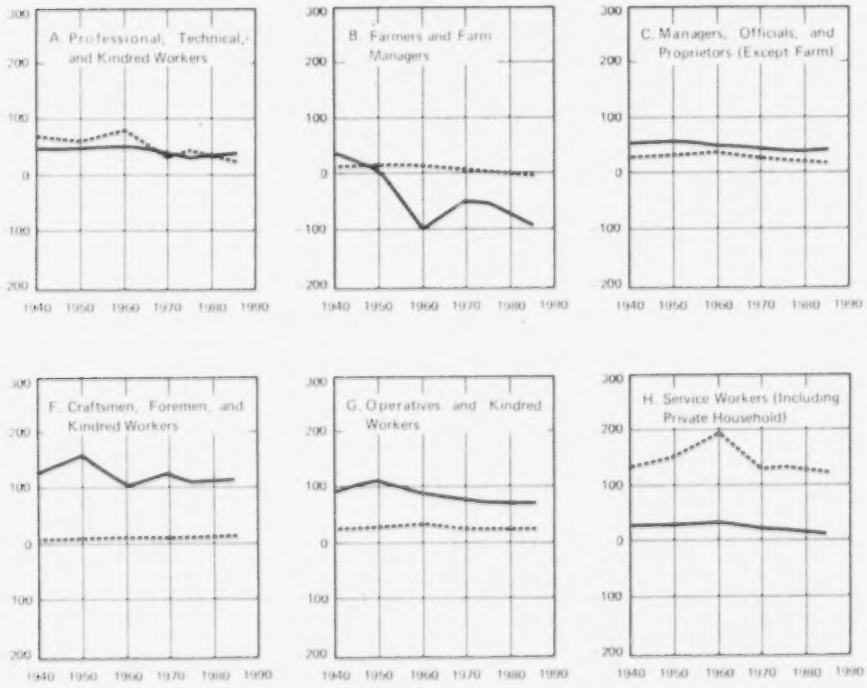


ANNUAL JOB OPENINGS CLASSIFIED BY ETPG

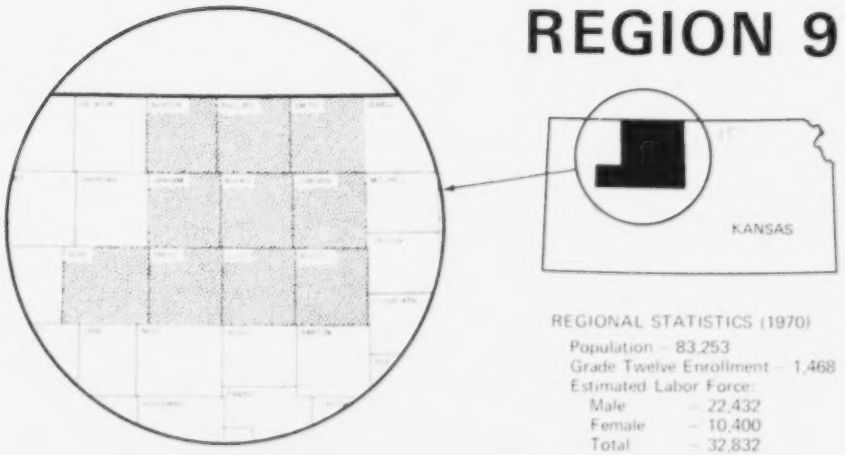


See foldout sheet for definitions

ANNUAL JOB OPENINGS CLASSIFIED BY


A. Professional, Technical, and Kindred Workers
B. Farmers and Farm Managers
C. Managers, Officials, and Proprietors (Except Farm)
F. Craftsmen, Foremen, and Kindred Workers
G. Operatives and Kindred Workers
H. Service Workers (Including Private Household)
1940 1950 1960 1970 1980 1990

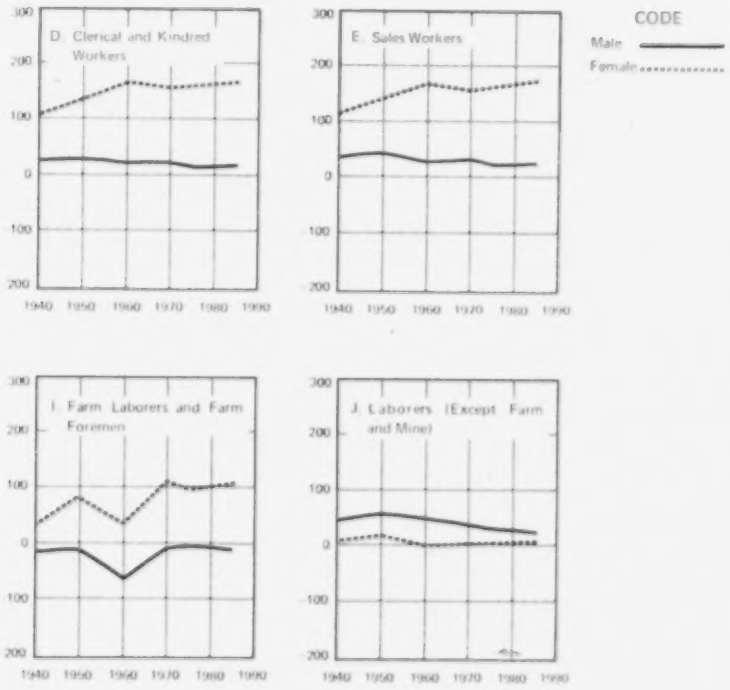
REGION 9



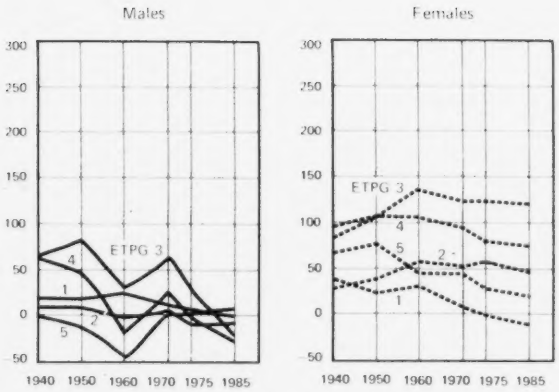
REGIONAL STATISTICS (1970)

Population – 83,253
Grade Twelve Enrollment – 1,468
Estimated Labor Force:
Male – 22,432
Female – 10,400
Total – 32,832

OCCUPATIONAL GROUP

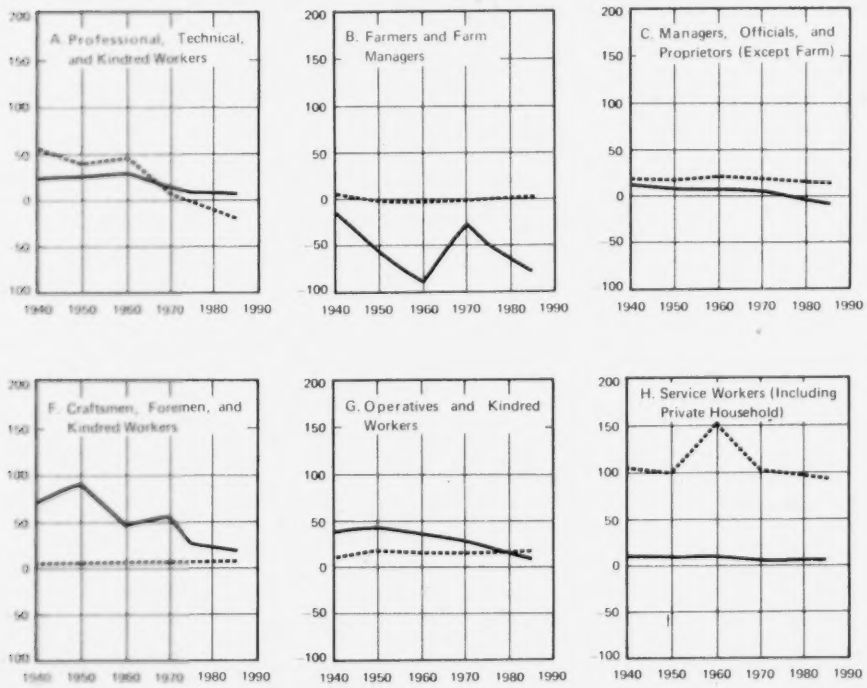


ANNUAL JOB OPENINGS CLASSIFIED BY ETPG

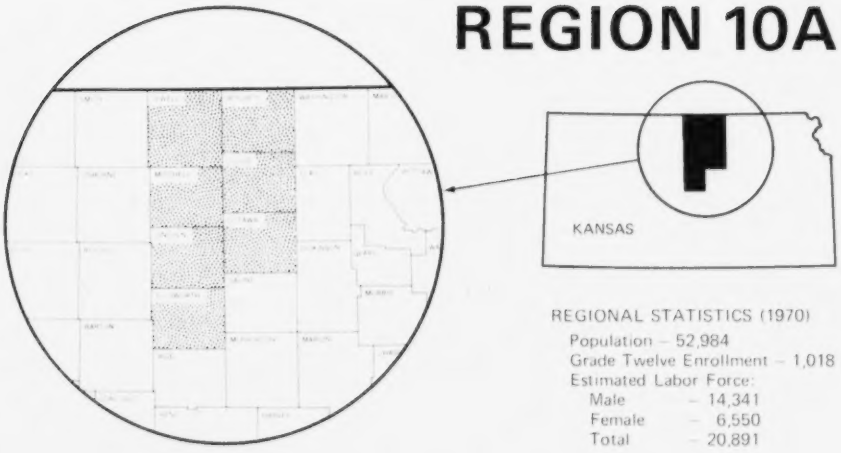


See fold-out sheet for definitions

ANNUAL JOB OPENINGS CLASSIFIED BY


A. Professional, Technical, and Kindred Workers
B. Farmers and Farm Managers
C. Managers, Officials, and Proprietors (Except Farm)
F. Craftsmen, Foremen, and Kindred Workers
G. Operatives and Kindred Workers
H. Service Workers (Including Private Household)
1940 1950 1960 1970 1980 1990

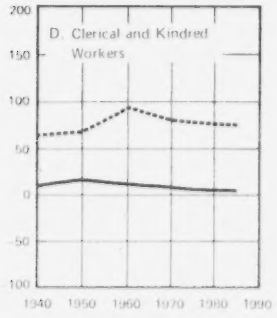
REGION 10A

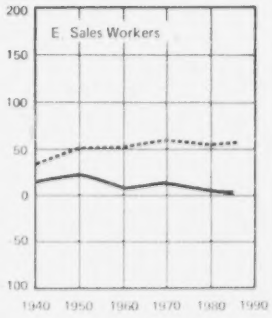


REGIONAL STATISTICS (1970)

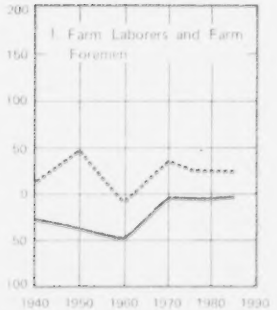
Population – 52,984
Grade Twelve Enrollment – 1,018
Estimated Labor Force:
Male – 14,341
Female – 6,550
Total – 20,891

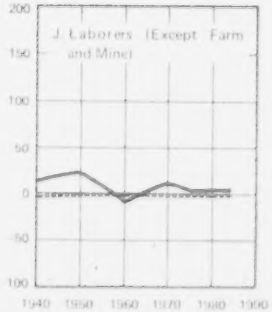
OCCUPATIONAL GROUP



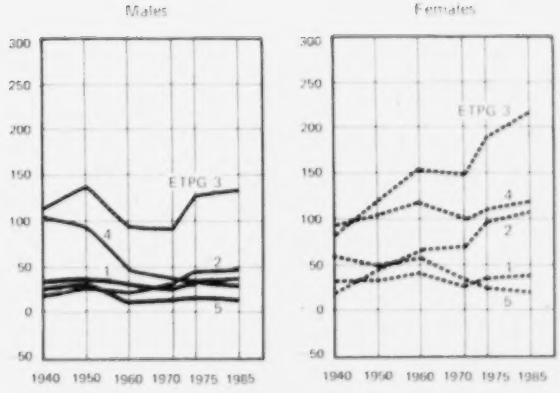


CODE
Male
Female





ANNUAL JOB OPENINGS CLASSIFIED BY ETPG



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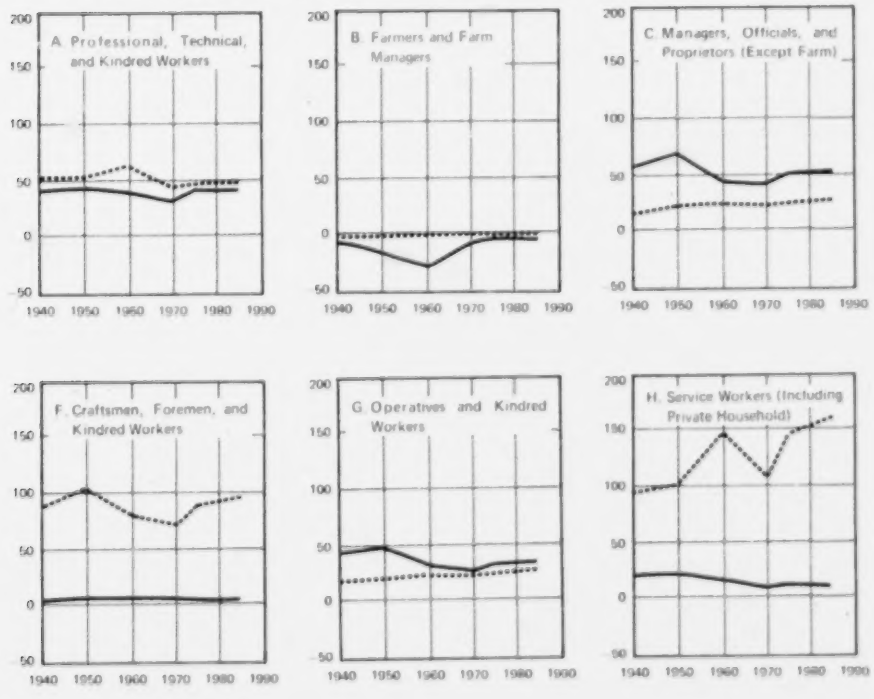
ANNUAL JOB OPENINGS CLASSIFIED BY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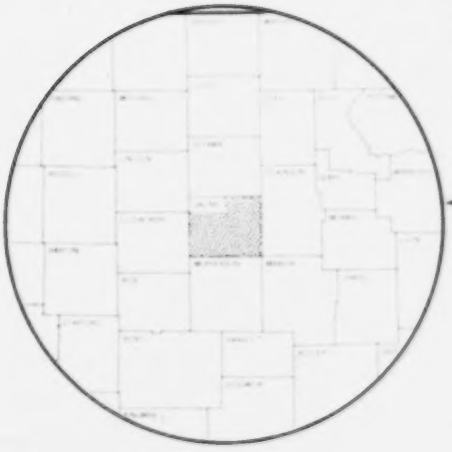
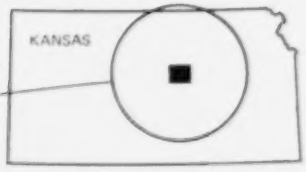
1940 1950 1960 1970 1980 1990

REGION 10B

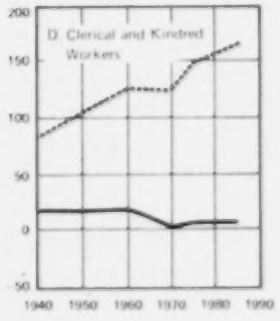


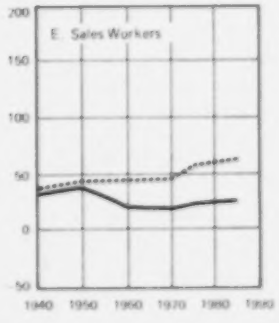


REGIONAL STATISTICS (1970)

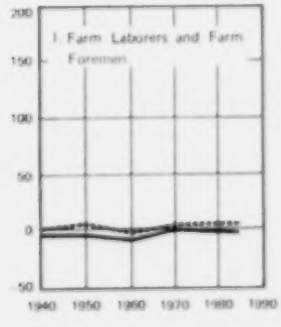
Population – 46,592
Grade Twelve Enrollment – 690
Estimated Labor Force
Male – 9,207
Female – 6,169
Total – 15,376

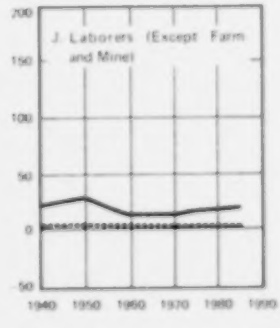
OCCUPATIONAL GROUP



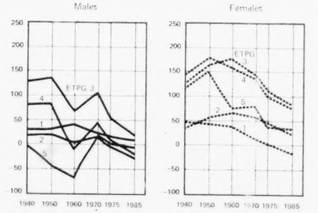


CODE
Male
Female



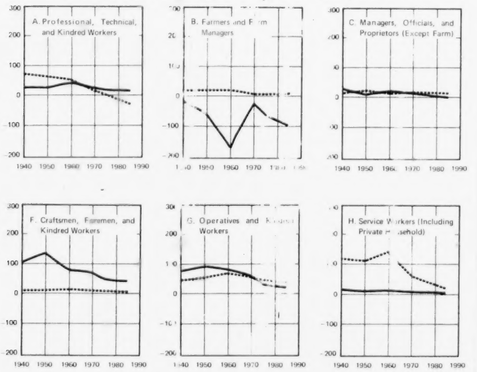


ANNUAL JOB OPENINGS CLASSIFIED BY ETPG



See footnote for definitions

ANNUAL JOB OPENINGS CLASSIFIED BY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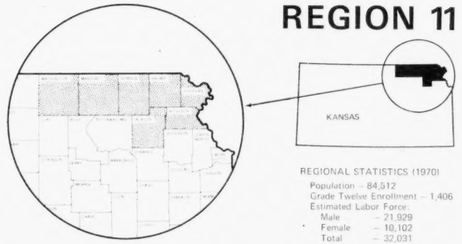
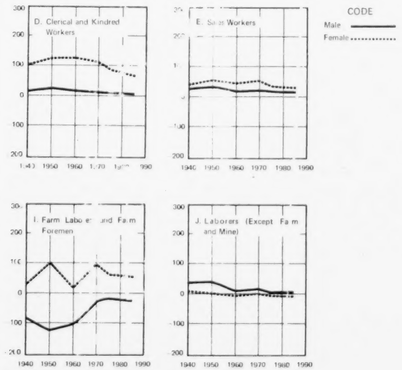
REGION 11



REGIONAL STATISTICS (1970)
Population – 84,512
Grade Twelve Enrollment – 1,406
Estimated Labor Force:
Male – 21,929
Female – 10,102
Total – 32,031

OCCUPATIONAL GROUP



CHARGE TO MASTER PLANNING COMMISSION

(1) Prepare a plan of the educational goals and objectives of Kansas for the area between the elementary-secondary school system and the four-year colleges and universities.

(2) Project the educational needs of Kansas students and the needs of the state and its economy in this middle educational level through the mid-1980's.

(3) Determine what the optimum role, financial structure, and school organization should be for:

(A) Community junior colleges offering one or more of the following educational programs: two-year general, terminal, technical, occupational, and transfer type courses;

(B) Vocational education schools offering general, occupational, vocational, and technical programs.

(4) Propose the optimum organization for the coordination of all post-high school institutions which are not under the state board of regents, and recommend methods for the coordination of post-high school institution programs with those of secondary schools and the public and private four-year colleges and universities.

(5) Indicate the impact of the first phase of the master plan on the capability of independent colleges and universities continuing to provide diversity of higher educational opportunities in the state.

(A) Define what the role of the private colleges and universities should be as a part of the total education program of the State of Kansas.

(B) Outline changes in the organization, relationships or financing of private institutions necessary to enable them to fulfill their role in the education program of Kansas, and to preserve their educational freedom.

(6) Submit recommendations regarding use of existing facilities, the need for additional institutions to adequately serve the needs of students, or the advisability of discontinuing any existing program or institution.

(7) Indicate methods by which vocational, occupational, and technical education may achieve public recognition of the importance of its role in the economy of the state, in providing beneficial training to the majority of students who do not graduate from four-year colleges and universities, and how it may attain its proper place in the educational program of the State of Kansas.

(8) Make findings and recommendations regarding the proper role, program, location, organization, and affiliation of special technical institutes, including the Kansas Technical Institute, Salina.

(9) Estimate the cost of implementing and putting into effect the proposed master plan, and recommend methods for support and financing.

(10) The plan should be innovative, comprehensive, and thorough, and should not be restricted to present statutes or constitutional provisions. It should not include detailed considerations of the condition, design, location, and use of individual buildings.